FM 3-20.971

RECONNAISSANCE TROOP

Recce Troop and Brigade Reconnaissance Troop

DECEMBER 2002

DISTRIBUTION RESTRICTION: Distribution authorized to US Government agencies and their contractors only to protect technical or operational information that is for official government use. This determination was made on 12 March 2001. Other requests for this document will be referred to Commander, US Army Armor Center, ATTN: ATZK-TDD-C, Fort Knox, Kentucky 40121-5000.

DESTRUCTION NOTICE: Destroy by any method that will protect disclosure of contents or reconstruction of the document

FM 3-20.971

Field Manual
No 3-20.971

Headquarters
Department of the Army
Washington, DC, 2 December 2002

RECONNAISSANCE TROOP

Recce Troop and Brigade Reconnaissance Troop

Contents

Page

PREFACE iii

Chapter 1 **INTRODUCTION** 1-1
Organizations 1-2
Missions, Capabilities, and Limitations 1-13
Responsibilities 1-15
Operational Environment 1-20

Chapter 2 **BATTLE COMMAND** 2-1
The Art of Command 2-2
Command and Control 2-6
Communications 2-28
Digitization 2-31
Techniques of Tactical Control 2-38

DISTRIBUTION RESTRICTION: Distribution authorized to U.S. Government agencies and their contractors only to protect technical or operational information that is for official government use. This determination was made on 12 March 2001. Other requests for this document will be referred to Commander, US Army Armor Center, ATTN: ATZK-TDD-C, Fort Knox, Kentucky 40121-5000.

DESTRUCTION NOTICE: Destroy by any method that will protect disclosure of contents or reconstruction of the document.

Chapter 3	**RECONNAISSANCE OPERATIONS**	3-1
	Fundamentals	3-2
	Reconnaissance Planning	3-11
	Actions on Contact	3-15
	Reconnaissance Handover	3-21
	Tactical Employment Considerations and Methods	3-26
	Zone Reconnaissance	3-38
	Area Reconnaissance	3-43
	Route Reconnaissance	3-49
Chapter 4	**SECURITY**	4-1
	Fundamentals	4-3
	Security Planning	4-5
	Screen	4-10
	Area Security	4-30
	Convoy Security	4-34
Chapter 5	**OTHER TACTICAL OPERATIONS**	5-1
	Movement	5-2
	Offense	5-9
	Defense as an Economy of Force	5-15
	Target Acquisition	5-32
	Assembly Areas	5-33
	Relief in Place	5-36
	Passage of Lines	5-40
	Breach Operations	5-45
Chapter 6	**COMBAT SUPPORT**	6-1
	Intelligence	6-1
	Fire Support/Target Acquisition	6-8
	Army Aviation	6-25
	Unmanned Aerial Vehicle Platoon	6-45
	Ground Sensor Platoon	6-48
	Multisensor Ground Platoon	6-51
	Nuclear, Biological, and Chemical Operations	6-54
	Brigade Combat Team Engineer Operations	6-56
	Air Defense	6-60
Chapter 7	**URBAN OPERATIONS**	7-1
	Fundamentals of Urban Operations	7-2
	Understanding the Urban Environment	7-5

	Planning for Urban Reconnaissance	7-11
	Execution of Urban Operations	7-20
Chapter 8	**COMBAT SERVICE SUPPORT**	8-1
	Fundamentals	8-2
	Organization	8-5
	Logistics	8-14
	Personnel Service Support	8-25
	Enemy Prisoners of War	8-29
Appendix A	**OPERATION ORDER GUIDE**	A-1
Appendix B	**PROTECTION**	B-1
Appendix C	**NUCLEAR, BIOLOGICAL, AND CHEMICAL OPERATIONS**	C-1
Appendix D	**STABILITY OPERATIONS AND SUPPORT OPERATIONS**	D-1
Appendix E	**DEPLOYMENT**	E-1
Appendix F	**COMMAND POST OPERATIONS**	F-1
Appendix G	**ENVIRONMENTAL PROTECTION**	G-1
	GLOSSARY	Glossary-1
	BIBLIOGRAPY	Bibliography-1
	INDEX	Index-1

Preface

This manual provides doctrine for the employment of brigade reconnaissance troops (BRTs) of mounted brigade combat teams (BCTs) and the reconnaissance troops (recce) of the Cavalry Squadron (Reconnaissance Surveillance and Target Acquisition [RSTA]).

FM 3-20.971 describes the tactical employment and operations of the reconnaissance troop. It describes troop operations in support of both the mounted BCT and the Cavalry Squadron (RSTA) of the Stryker Brigade Combat Team (SBCT). FM 3-20.971 is the doctrinal foundation that governs the development of equipment, training, and structure of the troop and its subordinate platoons and sections.

This manual covers basic doctrine in tactics, techniques of employment, organization, exercise on command, control, movements, and tactical operations appropriate to the troop and its headquarters section, reconnaissance platoons, and mortar section as applicable to each troops' table of organization and equipment.

The procedures described herein are intended as a guide only and are not to be considered inflexible. Each situation in war and military operations other than war must be resolved by intelligent interpretation and application of the doctrine set forth herein.

This manual is to be used in conjunction with FM 3-20.96 or FM 3-90.3. The manual reflects and supports the Army operations doctrine as stated in FM 3-0. Readers should be familiar with FM 3-20.97 [FM 17-97], FM 3-90 [FM 100-40], FM 3-91 [FM 71-100], FM 1-02 [FM 101-5-1], and FM 3-20.98 [FM 17-98]. Examples and graphics are provided to illustrate principles and concepts, not to serve as prescriptive responses to tactical situations. This publication provides units with the doctrinal foundation to train leaders, guide tactical planning, and develop standing operating procedures (SOP).

The US Army Armor Center is the proponent for this publication. Submit comments and recommended changes and the rational for those changes on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) to: Commander, US Army Armor Center, ATTN: ATZK-TDD-C, Fort Knox, KY 40121-5000, or e-mail comments to Doctrine@knox.army.mil, attention to Chief, Cavalry Branch.

Unless otherwise stated, masculine nouns and pronouns do not refer exclusively to men.

Chapter 1

Introduction

CONTENTS

Organizations 1-2
The Cavalry Squadron (RSTA) 1-3
The Recce Troop 1-5
The Mounted Brigade Combat Team 1-9
The Brigade Reconnaissance Troop 1-11
Missions, Capabilities, and Limitations 1-13
Missions 1-13
Capabilities 1-14
Limitations 1-15
Responsibilities 1-15
Troop Commander 1-15
Executive Officer 1-16
First Sergeant 1-16
Reconnaissance Platoon Leader 1-17
Platoon Sergeant 1-17
Fire Support Team 1-17
Mortar Section Sergeant 1-18
Supply Sergeant 1-19
Communications Sergeant 1-19
NBC NCO 1-19
HUMINT NCOIC 1-19
Operational Environment 1-20
Battlefield Framework 1-21
Linear and Nonlinear Battlespace 1-21
Organizing the Battlefield 1-22
Organizing Forces for the Offense 1-25
Organizing Forces for the Defense 1-26
Organizing Forces for Tactical Security 1-28
Organizing Forces for Tactical Movement 1-29
Scope of Operations 1-30

Success across the full spectrum of operations (offense, defense, stability, and support) requires success in intelligence, surveillance, and reconnaissance (ISR) operations. The maneuver commander requires accurate, complete, and timely reconnaissance for success. The degree to which he correctly understands the threat situation, his own force's situation, and the terrain heavily influences his battlefield success. Emerging command and control systems assist the commander with understanding the common operational picture (COP), but the significance of ground reconnaissance cannot be overstated. The burden of obtaining real-time information about the threat and terrain falls on his tactical reconnaissance units. A reconnaissance troop operates across the full spectrum of conflict: from smaller-scale contingency (SSC) to major theater of war (MTW) operations. Regardless of the environment or mission, the troop's primary function is always the same: Be the eyes and ears of the maneuver commander and provide the necessary information to allow him to make timely and accurate decisions. The need for reconnaissance in Army operations remains unchanged within the varied operational environment. Though the Army must respond to modernized conventional and unconventional threats and capabilities employed asymmetrically, the fundamentals of reconnaissance and security are unaltered.

The purposes of this chapter are as follows:

- Describe the organization of the two types of reconnaissance troops:
  - **Reconnaissance (recce) troop.** This troop is an element of the cavalry squadron (reconnaissance, surveillance, and target acquisition [RSTA]) in the Stryker brigade combat team (SBCT). It is equipped with Stryker reconnaissance vehicles (RV).
  - **Brigade reconnaissance troop (BRT).** An element of the mounted brigade combat team (BCT) in the Limited Conversion Division (LCD) XXI, this troop is equipped with high-mobility multipurpose wheeled vehicles (HMMWV).
- Outline the missions each type of troop performs.
- Establish the responsibilities of key personnel during operations.
- Depict the operational environment of each troop and its supported BCT.

SECTION I – ORGANIZATIONS

1-1. Reconnaissance troops are optimized to conduct reconnaissance and surveillance of a multidimensional range of threats operating on an area basis. This means that the troop's orientation is on the area of operations (AO) and the wide variety of threats facing the BCT. The troop must leverage information technology and capabilities in complex and urban terrain to develop the situation early on by focusing on designated areas and multidimensional and asymmetrical threats. The troop assists the BCT commander in attaining situational understanding (SU) to achieve battlefield mobility and agility while choosing the time and place to confront the threat and his method of engagement.

1-2. Based on its commander's intent and guidance, the troop conducts reconnaissance in support of friendly forces to provide current, accurate information about the threat, terrain, weather, society, physical resources, and infrastructure within a specified AO. This provides its higher headquarters with an opportunity to maneuver freely and rapidly to achieve their objective. Reconnaissance troops perform three types of reconnaissance: route, zone, and area. Additionally, higher headquarters and the troop endeavor to ***link*** the purpose of reconnaissance to—

- Answer the commander's critical information requirements (CCIR), and/or
- Answer voids in the unit's intelligence preparation of the battlefield (IPB) through intelligence requirements (IR), and/or
- Support targeting through target acquisition.

1-3. As a part of the Army's transformation process, the recce troop and the BRT are designed to provide their respective commanders an

increased number of tools for executing ISR operations. Unmanned aerial vehicles (UAV), artillery radars and observers, air defense radars, and satellite tracking systems all contribute to the effort. However, the BCT's primary source of intelligence remains its organic reconnaissance units. Successful reconnaissance operations permit the BCT commander freedom of maneuver in order to concentrate combat power and apply assets deliberately at the decisive time and place of his choosing. Only through reconnaissance can he determine source information, which routes are suitable for maneuver, where the threat is strong and weak, and where gaps exist.

THE CAVALRY SQUADRON (RSTA)

1-4. The cavalry squadron (RSTA) is designed to serve as the SBCT commander's primary eyes, ears, and sensors, and as the first-line military assessment for information gathered through reconnaissance and surveillance. As such, it is designed to efficiently direct and execute information collection.

1-5. The SBCT is a full-spectrum combat force. It is designed and optimized primarily for employment in SSCs in complex and urban terrain, confronting low-end and mid-range threats that may employ both conventional and asymmetric capabilities. The SBCT deploys very rapidly, executes early entry, and conducts effective combat operations immediately on arrival to prevent, contain, stabilize, or resolve a conflict through shaping and decisive operations. The SBCT typically maintains an offensive orientation. However, depending on the nature and evolution of the contingency, it is capable of conducting the full-spectrum operations, including offensive, defensive, stability, and support operations. Its core operational capabilities rest upon excellent operational and tactical mobility, enhanced SU, combined-arms integration down to company level, and high dismount strengths for close combat in urban and complex terrain (see Figure 1-1).

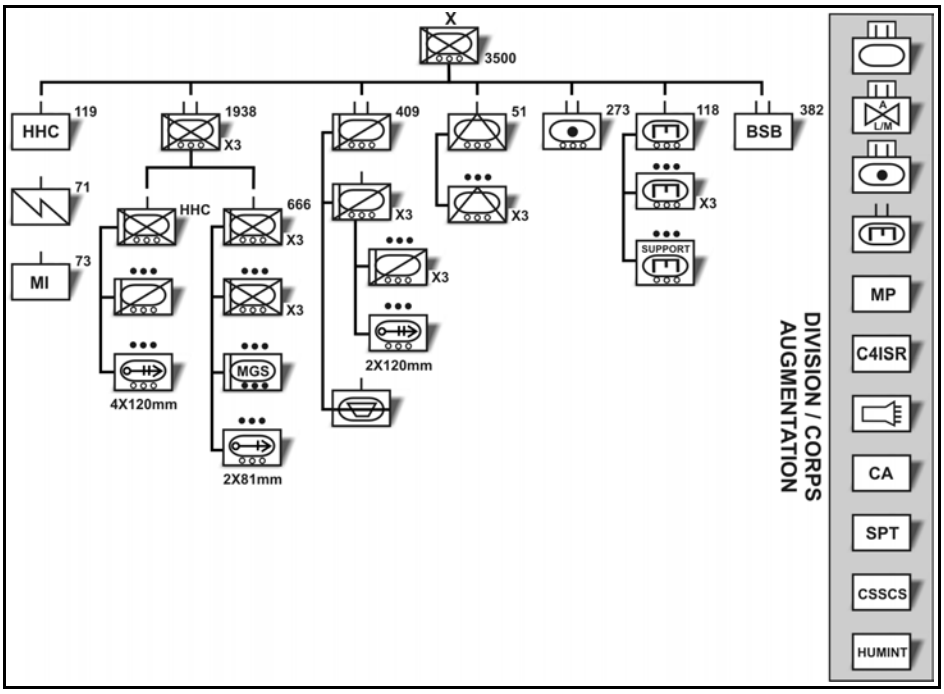


Figure 1-1. Stryker Brigade Combat Team Organization

1-6. To conduct the SBCT's ISR operations, the squadron is composed of five troops: headquarters and headquarters troop (HHT), three reconnaissance troops, and a surveillance troop (see Figure 1-2). The squadron is essential to successful SBCT operations within this environment in that it—

- Provides a significant dismounted/mounted reconnaissance force, integrated with UAVs, a ground sensor platoon, a multisensor ground (MSG) platoon, and a nuclear, biological, and chemical (NBC) reconnaissance platoon that shape operations throughout the SBCT's AO.
- Enables the brigade commander to employ his ground forces and joint fires precisely at the time and place of his choosing.
- Assures protection of the highly mobile, light-armored force by providing timely and accurate information.
- Allows the brigade commander to make decisions necessary for the judicious application of power.

1-7. The squadron's primary missions that support the SBCT's offense, defense, stability, and support operations are—

- Reconnaissance.
  - Area reconnaissance.
  - Zone reconnaissance.
- Security.
  - Screen.
  - Area security.

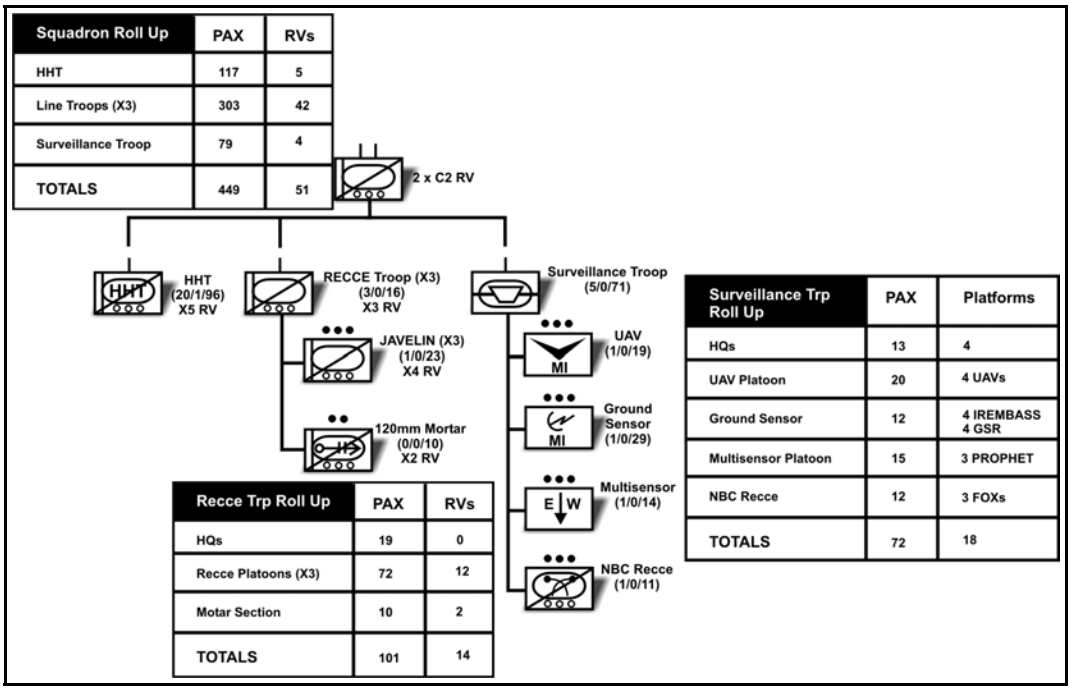


Figure 1-2. Squadron Organization

THE RECCE TROOP

1-8. The recce troop consists of 6 officers and 83 enlisted soldiers. It is organized into a headquarters section, three recce platoons, and a mortar section. The three recce platoons are organized with four reconnaissance vehicles with crews and a scout section (equipped with Javelins) for dismounted reconnaissance. The mortar section consists of two 120-mm self-propelled mortars and a fire direction center.

HEADQUARTERS SECTION

1-9. The troop headquarters section is organized and equipped to perform command and control and logistical support functions for the troop. The section consists of 3 officers and 14 enlisted soldiers. The headquarters section includes the troop commander; executive officer (XO); first sergeant (1SG); and the operations, human intelligence (HUMINT), NBC, communications, and supply sergeants. The troop does not have any organic maintenance assets or personnel other than the two communications repairmen (see Figure 1-3).

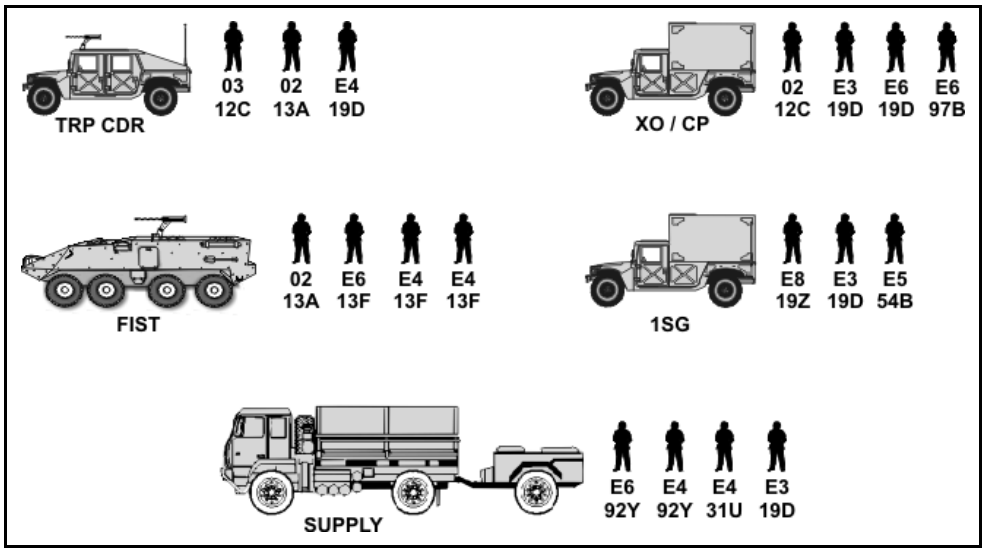


Figure 1-3. Recce Troop (RSTA) Headquarters Section

TROOP COMMAND POST

1-10. The troop command post (CP) serves as the net control station (NCS) for the troop and is a critical communications link to the squadron or SBCT CPs. One of the primary functions of the troop CP is collecting combat information from the recce platoons and reporting significant threat information gathered during their reconnaissance and surveillance activities to the higher CP. The CP functions are:

- Assist the commander in command and control (C2) of the troop.
- Maintain situational awareness of friendly and threat forces in the troop's AO and area of interest (AOI).
- Coordinate combat service support (CSS) for the troop.
- Report information to higher headquarters and adjacent units.

1-11. The CP operates under the direction of the XO, and is manned by the troop operations sergeant, the HUMINT noncommissioned officer (NCO), and may include one or both communications maintenance personnel. The CP tracks the battle at the troop and squadron levels and relays information to the commander and subordinate platoons pertaining to the friendly and threat situation. The CP assists the commander in the control of the troop by advising him on the status of subordinate and adjacent units, assisting in creating/forwarding digital and voice reports, and controlling and monitoring the troop's CSS activities. The CP continuously monitors the situational awareness picture to alert elements to threat, terrain conditions, or obstacles. The CP coordinates and integrates actions with supporting and adjacent units. The primary concern when positioning the troop CP is its ability to communicate with the controlling unit CP and the subordinate elements of the troop.

1-12. During reconnaissance or offensive operations, the CP positions to maintain communications with the platoons and the controlling

headquarters CP (tactical CP [TAC CP] or main CP). During security or defensive operations, the CP should be positioned in sufficient depth to avoid contact with the threat while maintaining communications with the forward scout sections. For noncontiguous environments, the troop is positioned to facilitate command, control, and communications (C3) and to provide local security.

FIRE SUPPORT TEAM

1-13. The fire support team (FIST) is responsible for coordinating indirect fires for the troop. The FIST consists of one fire support officer (FSO), one NCO (team chief), one enlisted fire support specialist, and one enlisted radio operator/driver. The team is mounted on a fire support vehicle.

RECONNAISSANCE PLATOON

1-14. The platoons' primary missions are reconnaissance/surveillance, execution of security missions, and in some METT-TC (mission, enemy, terrain and weather, troops and support available, time available, and civil considerations) conditions, to conduct offensive or defensive missions. Serving as the commander's eyes and ears, the platoons provide current battlefield information to help the troop commander plan and conduct tactical operations. They are critical in painting the picture of the threat situation, using both FM and digital communications (Force XXI Battle Command Brigade and Below [FBCB2]). Additionally, the scouts can be expected to execute target acquisition missions and battle damage assessment (BDA).

1-15. The platoons are organized and equipped to conduct reconnaissance and security in support of the troop mission. They may conduct an economy-of-force role, or offensive, defensive, and retrograde operations based on METT-TC. The platoon consists of 1 officer and 20 enlisted soldiers and is equipped with 4 RVs (see Figure 1-4).

Human intelligence *is the intelligence derived from the analysis of information obtained from a human source or a related document. The HUMINT discipline includes those personnel and organizations directed toward the collection, processing, analysis, and production of human intelligence.*

1-16. Each recce squad in the platoon has assigned a 97B HUMINT collector. HUMINT collectors are integral members of their squads and conduct initial contact and gather information from enemy prisoners of war (EPW), detainees, refugees, local inhabitants, friendly forces, and captured documents. They conduct tactical questioning (the expedient initial questioning of a HUMINT source directed toward the collection of priority tactical information) and limited document exploitation in support of the squadron's ground reconnaissance mission. They pass their collection results through their chain of command in the form of size, activity, location, unit, time, and equipment (SALUTE) reports. They do not have the expertise, experience, or organizational support to conduct contact operations or counterintelligence operations. They do pass source data through the HUMINT noncommissioned officer in charge (NCOIC) to the S2X to help the S2X identify human sources for exploitation by the tactical HUMINT teams of the military intelligence (MI) company.

1-17. The platoon can organize into various configurations, but is usually employed as two reconnaissance sections, depending on factors of METT-TC. The reconnaissance platoon may also operate with target acquisition teams (e.g., combat observation lasing team [COLT]), MI teams equipped with the improved remotely monitored battlefield sensor system (IREMBASS), or attached engineer elements.

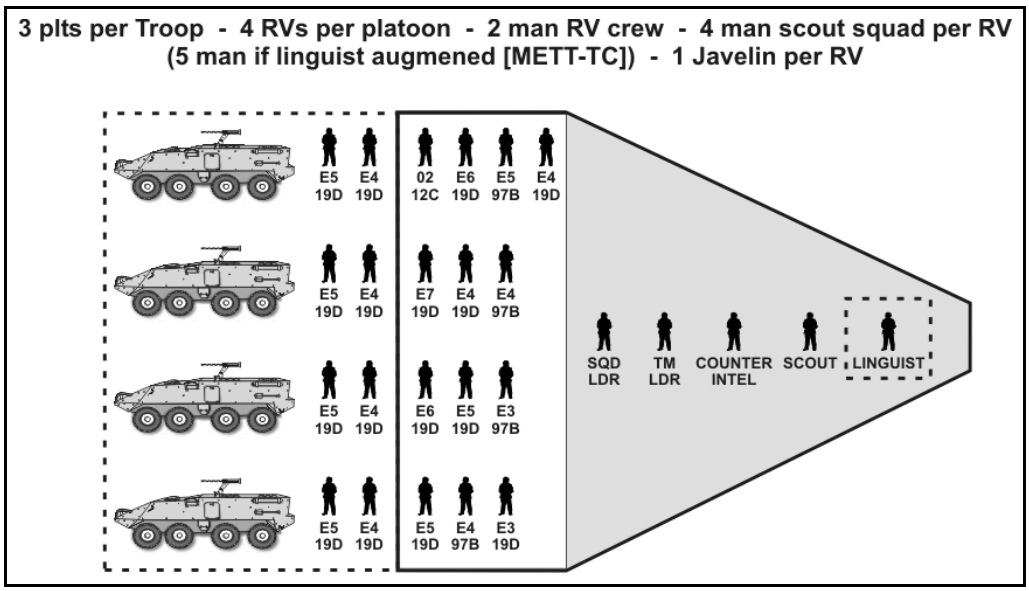


Figure 1-4. Recce Platoon Organization

MORTAR SECTION

1-18. The mortar section is organized and equipped to provide immediate indirect fires in support of troop operations. Such supporting fires are usually suppression, screening, obscuration, or illumination. The section consists of 10 enlisted soldiers. It is equipped with two 120-mm mortars mounted in mortar RV carriers with a supporting wheeled ammunition carrier (see Figure 1-5).

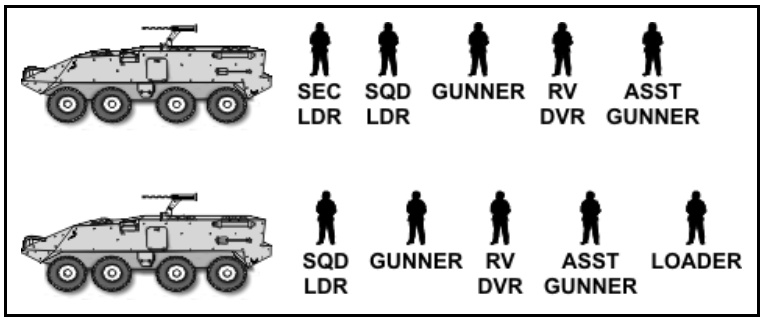


Figure 1-5. Mortar Section Organization

SURVEILLANCE TROOP

1-19. The surveillance troop may operate as an independent organization, with its subordinate elements operating separately within the recce troop's AO, or attach elements to troop control. The surveillance

troop provides the squadron commander a mix of specialized capabilities built around airborne and ground mobile sensors.

1-20. The ***UAV platoon*** launches, flies, recovers, and maintains the squadron's four aerial reconnaissance platforms.

1-21. The ***ground sensor platoon*** consists of ground surveillance radar and remote battlefield sensors. The ground sensor platoon provides remotely emplaced acoustics monitoring capabilities that capture and track threat personnel and equipment measurements and signatures.

1-22. The ***multisensor ground platoon*** consists of ground-based radio signals intercept and direction-finding teams capable of conducting nodal and pattern analysis of area communications activities. The platoon also has a dedicated communications terminal that transmits, reports, and receives voice, data, digital, and imagery from sources through national level.

1-23. The ***NBC recce platoon*** provides a special reconnaissance capability and performs five critical tasks on the battlespace—detect, identify, mark, report, and sample. It conducts route, zone, and area NBC reconnaissance to determine the presence and extent of NBC contamination. It can locate and identify life-threatening chemical warfare agents and radiological contaminants. The platoon does not have a biological detection/identification capability, but it can take samples of suspected biological hazards for transfer to a Theater Army Medical Laboratory (TAML) for further analysis.

THE MOUNTED BRIGADE COMBAT TEAM

1-24. The BCT is a task-organized command optimized for fighting offensive and defensive operations in an MTW as part of a division, corps, or joint task force (JTF).

1-25. The BCT is trained and equipped to conduct full-spectrum operations (offense, defense, stability, and support). The BCT organization includes its organic headquarters and headquarters company (HHC) and reconnaissance troop, its assigned mechanized infantry and tank battalions, its habitually attached division assets (e.g., artillery battalion, engineer battalion, forward support battalion [FSB], air defense artillery [ADA] battery, MI company), and other divisional or corps assets required to complete its assigned mission (see Figure 1-6).

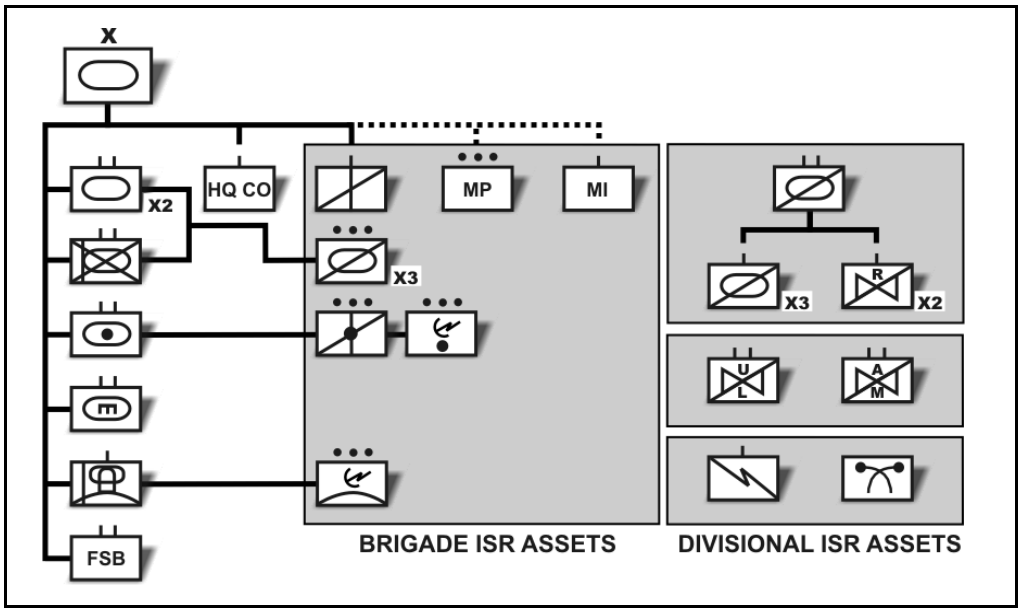


Figure 1-6. Brigade Combat Team Organization

1-26. BCT ISR operations are multifaceted and their integration from division through battalion levels eliminates unit and functional "stovepipes" for planning, reporting, and processing information. The BRT's primary mission is to obtain information for the BCT commander and answer his CCIR. It interacts with the divisional cavalry squadron, supporting MI assets, and battalion scout platoons in the performance of its reconnaissance and security missions. ISR assets available to the BCT that the BRT may receive information from, interact with, or execute operational control over include:

- COLT teams from the direct support (DS) artillery battalion.
- Engineer reconnaissance team from the DS engineer battalion.
- NBC reconnaissance section from the divisional chemical company.
- Ground surveillance radar (GSR) team from the DS MI company.
- Improved Remotely Monitored Battlefield Sensor System (IREMBASS) team from the DS MI company.
- UAVs operated by the DS MI company.
- Signal intercepts (PROPHET) operated by the DS MI company.
- Battalion/task force scout platoons.
- Air and ground cavalry troop from the divisional cavalry squadron.
- AN/TPQ 36 (Q36) counterfire radar.
- AN/MPQ-64 (Sentinel) air defense systems radar.

THE BRIGADE RECONNAISSANCE TROOP

1-27. The BRT consists of 4 officers and 45 enlisted soldiers. It is organized into a headquarters section and two reconnaissance platoons.

HEADQUARTERS SECTION

1-28. The BRT headquarters section is organized and equipped to perform command and control and logistical support functions for the BRT. The section consists of 2 officers and 11 enlisted soldiers. The headquarters section includes the troop commander; XO; 1SG; and the operations, NBC, communications, and supply sergeants. The troop does not have any organic maintenance assets or personnel other than the two communications repairmen (see Figure 1-7).

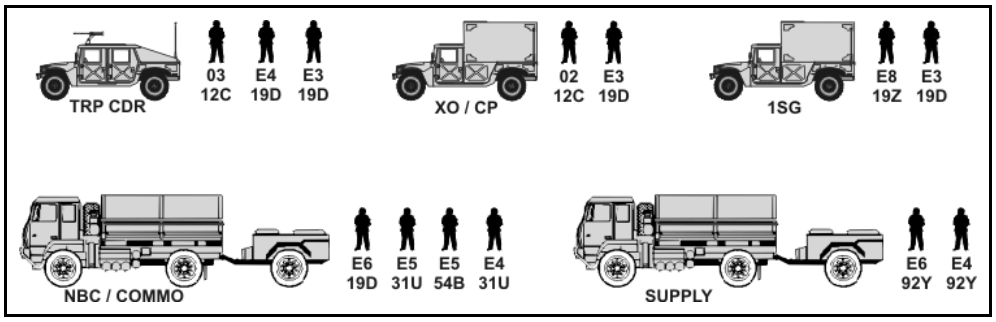


Figure 1-7. Brigade Reconnaissance Troop Headquarters Organization

BRIGADE RECONNAISSANCE TROOP COMMAND POST

1-29. The BRT CP serves as the NCS for the troop and is a critical communications link to the BCT CP. One of the primary functions of the BRT CP is collecting combat information from the reconnaissance platoons and reporting significant threat information gathered during their reconnaissance and surveillance activities to the BCT. The CP functions are as follows:

- Assist the commander in C2 of the troop.
- Maintain situational awareness of friendly and threat elements in the troop's AO and AOI.
- Coordinate CSS for the BRT.
- Report information to BCT headquarters and to forward and adjacent units.
- Coordinate required information from higher.
- Ensure information is pushed down.

1-30. The CP operates under the direction of the XO, and is manned by the troop operations sergeant, the NBC NCO, and the two communications maintenance personnel. The CP tracks the battle at the troop and BCT levels and relays information to the commander and subordinate platoons pertaining to the friendly and threat situation. The CP assists the commander in the control of the BRT by advising him on the status of subordinate units and adjacent units, by assisting in creating/forwarding digital and voice reports, and by controlling and monitoring the BRT's CSS activities. The CP continuously monitors the COP to alert elements to unexpected threat, terrain conditions, or obstacles. The CP coordinates and integrates actions with supporting and

adjacent units. The primary concern when positioning the BRT CP is its ability to communicate with the controlling BCT CP and the subordinate elements of the BRT.

1-31. During reconnaissance or offensive operations, the CP should position to maintain communications with the platoons and the controlling brigade CP (TAC CP or main CP). During security or defensive operations, the CP should be positioned in sufficient depth to avoid contact with the threat while maintaining communications with the forward reconnaissance sections.

RECONNAISSANCE PLATOON

1-32. The reconnaissance platoons are organized and equipped to conduct reconnaissance and security in support of the BCT. They may conduct an economy-of-force role, or offensive, defensive, and retrograde operations based on METT-TC. The platoon consists of 1 officer and 17 enlisted soldiers. It is equipped with six M1025/M1026 HMMWVs (three MK-19 equipped and three caliber .50 equipped, with three of the six also Long-Range Advanced Scout Surveillance System [LRAS3] equipped). The platoons may operate with attached COLTs, IREMBASS-equipped MI teams, or attached engineer elements. The platoon can organize into various configurations, but is usually employed as a headquarters and two reconnaissance sections, depending on factors of METT-TC (see Figure 1-8).

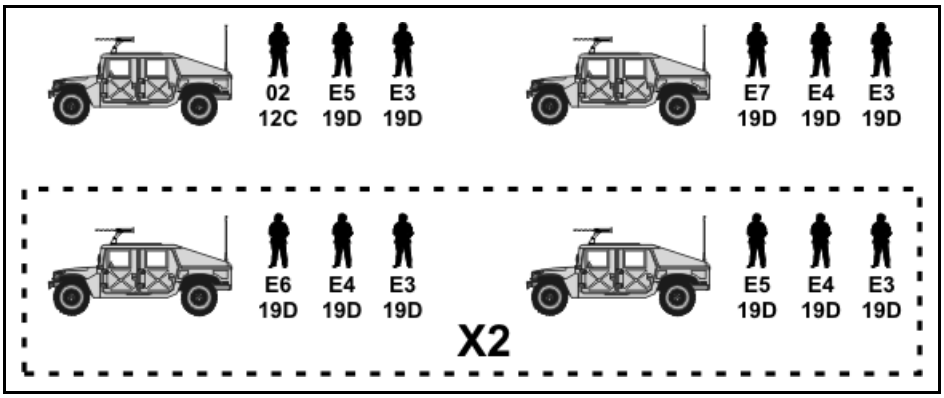


Figure 1-8. Reconnaissance Platoon Organization

COMBAT OBSERVATION LASING TEAM PLATOON

1-33. The COLT platoon is organic to the DS artillery battalion and is attached to the BCT. COLTs are dedicated assets that can be tasked to execute fires for the BCT. Although not their primary mission, COLTs can be integrated into and tasked to support ISR operations. As with the BRT, employing stealth techniques is crucial to the COLT's survivability and key to mission accomplishment. If attached or controlled by the BRT, the troop CP must ensure that the COLT has communication with the BCT fire support element (FSE).

1-34. The platoon is composed of 1 officer and 20 enlisted soldiers organized into a platoon headquarters and 3 squads, with each squad composed of 2 teams. Each team is equipped with the lightweight laser designator/range finder (LLDR) for those munitions requiring reflected

laser energy for final ballistics guidance. The target designator set is also equipped with a thermal sight. They are also equipped with the Advanced Field Artillery Tactical Data System (AFATDS) lightweight computer unit (LCU) loaded with the forward observer software (FOS-LCU). They operate from a HMMWV platform and are capable of both mounted and dismounted operations (see Figure 1-9).

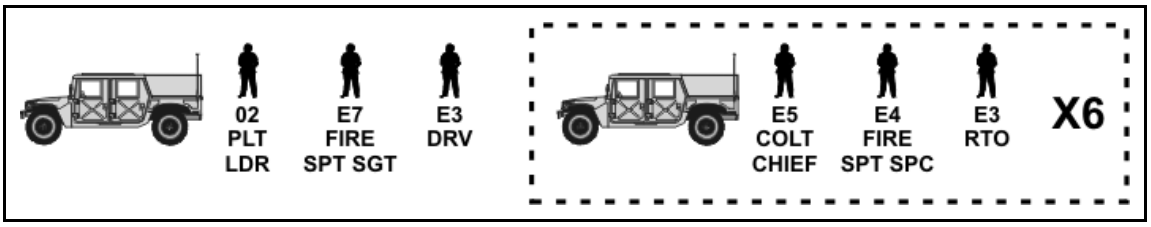


Figure 1-9. COLT Platoon Organization

SECTION II – MISSIONS, CAPABILITIES, AND LIMITATIONS

MISSIONS

1-35. The reconnaissance troops have six core missions in supporting their respective higher headquarters across the full spectrum of operations—offense, defense, stability, and support operations. These missions are route reconnaissance, zone reconnaissance, area reconnaissance, screen, area security, and convoy security. They may perform other missions if they are reinforced. The troop's limitations and capabilities associated with their tables of organization and equipment (TOE) and METT-TC must be considered when employing them in a specific mission role (see Figure 1-10).

	RECCE TROOP	BRIGADE RECONNAISSANCE TROOP
RECONNAISSANCE MISSIONS		
Route	P/R	P/R
Zone	F	F
Area	F	F
SECURITY MISSIONS		
Screen	P	P
Area Security	P	P
Convoy Security	R	P/R
F = Fully Capable **R = Capable when Reinforced** **P = Capable under Permissive METT-TC**		

Figure 1-10. Troop Missions

CAPABILITIES

1-36. The troops are organized to provide the following capabilities:

- Conduct simultaneous reconnaissance of up to six areas based on the size of the area, the IR, and the time constraints. (A reconnaissance section would reconnoiter each area, and the commander must consider the adverse affect on the troop's ability to conduct continuous reconnaissance.)
- Conduct a detailed zone reconnaissance at a rate dependent on the terrain and execution of all the critical tasks associated with the mission. (A properly performed zone reconnaissance takes considerable time, typically about 1 kilometer per hour.)
- Reconnoiter one route per platoon in a permissive no-threat environment. Reconnoiter up to two routes in a low-threat environment. Reconnoiter one route in a medium- to high-threat environment.
- When faced with a lightly equipped threat, conduct either aggressive or stealthy reconnaissance, depending on the higher commander's guidance.
- Provide all weather, accurate, and timely reconnaissance and surveillance in non-restrictive, restrictive, and urban terrain.
- With organic counterintelligence (CI) assets, conduct detailed operations in urbanized terrain.
- Engage in close, stealthy reconnaissance with threat forces to provide HUMINT.
- Gather information about multidimensional threats that range from conventional to unconventional, and use asymmetrical tactics to include—
  - Regular and irregular forces.
  - Special forces.
  - Terrorists.
  - Political factions.
  - Supporting government factions.
  - Criminal elements and agencies.
- Reduce risk to the BCT by assuring survivability through information to avoid contact or achieve overwhelming combat power at the decisive point.
- Conduct or support target acquisition.
- Assist in shaping the battlespace environment by providing information or directing fires to disrupt the threat commander's decision cycle.
- Screen up to a 10-kilometer-wide AO.
- Maintain continuous surveillance of up to six battalion-sized avenues of approach.
- Maintain 12 separate short-duration (less than 12 hours) observation posts (OP) simultaneously.
- Maintain six separate long-duration (greater than 12 hours) OPs simultaneously.

LIMITATIONS

1-37. The troop has limitations that can be reduced through proper employment and/or augmentation. It is not organized for decisive operations. It must be heavily augmented with combat units to be successful if tasked to conduct offensive and defensive missions in support of its higher headquarters operations.

- Troop vehicles are lightly armored and are severely limited in their ability to reconnoiter against a mechanized threat.
- Troop has no organic service support capability (medical and maintenance) and cannot provide security for service support operations in a nonpermissive environment without using reconnaissance sections.
- Crew-served weapons lack standoff, lethality, and survivability in terrain lacking cover and concealment.
- Troop requires augmentation to perform traditional cavalry missions such as guard, delay, and other economy-of-force missions.
- With permissive METT-TC, the troop is capable of operations in stability or a support environment.

SECTION III – RESPONSIBILITIES

TROOP COMMANDER

1-38. The troop commander is responsible to his higher commander for the discipline, combat readiness, and training of the troop, and for the maintenance of its equipment. He must be proficient in the tactical employment of the troop and its assigned and attached combat support (CS) or CSS elements. He must also know the capabilities and limitations of the troop's personnel and equipment as well as those of elements attached to him. He uses the troop-leading procedures to prepare the troop for operations and issues instructions to his subordinate leaders in the form of clear, concise combat orders.

1-39. The troop commander's additional responsibilities are—

- Serve as the subject matter expert in reconnaissance and security fundamentals and critical tasks.
- Plan and execute fires to support the troop's missions.
- Synchronize operations with adjacent and supporting units.
- Synchronize and plan the use of additional ISR assets (UAV, IREMBASS, GSR, PROPHET, CI, etc.).
- Understand BCT doctrine.
- Synchronize and plan the use of additional combat arms assets (infantry platoon, mobile gun system [MGS] platoon, tank platoon, or mechanized platoon).
- Accomplish all missions assigned to the troop in accordance with the higher commander's intent and scheme of maneuver.
- Preserve the reconnaissance capability of the troop.

EXECUTIVE OFFICER

1-40. The troop XO is second in command. He supervises the troop CP and stays attuned to the tactical situation in the troop's AO. He receives, verifies, and consolidates digital and voice tactical reports from the platoons and forwards them to the higher headquarters, adjacent, and following units. When FBCB2 use is limited, the XO ensures the CP converts FM reports into digital reports to generate the red and blue situational awareness.

1-41. The XO's other duties are—

- Assist the commander in performing precombat inspections (PCI).
- Ensure all voice and digital communications are properly functioning.
- In conjunction with the 1SG, plan and supervise the troop's CSS effort prior to the battle.
- Assist in preparation of the operations order (OPORD), especially paragraph 4 (service support).
- Conduct tactical coordination with higher, adjacent, and supporting units.
- As required, assist the commander in issuing orders to the troop headquarters and attachments.
- Conduct additional missions, as required. These may include serving as officer in charge (OIC) for a quartering party or as the leader of the detachment left in contact (DLIC) in a withdrawal.
- Assist the commander in preparations for follow-on missions.
- Assume command of the troop, as required.

FIRST SERGEANT

1-42. The 1SG is the troop's senior NCO with the primary responsibility of training individual skills and sustaining the troop's ability to fight. He is the troop's primary CSS operator; he helps the commander to plan, coordinate, and supervise all logistical activities that support the tactical mission. He operates where the commander directs or where his duties require him.

1-43. The 1SG's specific duties include the following:

- Execute and supervise routine operations. This may include enforcing the tactical standing operating procedures (SOP); planning and coordinating training; coordinating and reporting personnel and administrative actions; and supervising supply, maintenance, communications, and field hygiene operations.
- Supervise, inspect, and/or observe all matters designated by the commander. For example, the 1SG may observe and report on a portion of the troop's sector.
- Plan, rehearse, and supervise key logistical actions in support of the tactical mission. These activities include resupply of Class I, III, and V products and materials; maintenance and recovery; medical treatment and evacuation; and replacement/return-to-duty (RTD) processing.

- Assist and coordinate with the XO in all critical CSS functions.
- As necessary, serve as quartering party NCOIC.
- Conduct training and ensure proficiency in individual and NCO skills and small-unit collective skills that support the troop's mission essential task list (METL).
- In conjunction with the commander, establish and maintain the foundation for troop discipline.

RECONNAISSANCE PLATOON LEADER

1-44. The platoon leader is responsible to the troop commander for the discipline, training, and combat readiness of the reconnaissance platoon. He must be proficient in the tactical employment of the platoon and the use of his digital equipment. He must know the capabilities and limitations of the platoon's personnel and equipment. He must remain cognizant of all attached elements operating in his sector of responsibility and continually update plans for their security and logistical support as required.

1-45. The platoon leader's additional responsibilities are—

- Accomplish all missions assigned to the platoon in accordance with the troop commander's intent.
- Preserve the reconnaissance capability of the platoon, and inform the commander and XO of the tactical situation via FM and digitized contact and spot reports.
- Lead an integrated reconnaissance/COLT platoon in executing fire support tasks within reconnaissance and security missions.

PLATOON SERGEANT

1-46. The platoon sergeant (PSG) is the senior NCO in the platoon. He is responsible to the platoon leader and the 1SG for the training of individual skills. He leads elements of the platoon as directed by the platoon leader, and assumes command of the platoon in his absence. The PSG assists the platoon leader in maintaining discipline, conducting training, and exercising control. He supervises platoon CSS, which includes supply and equipment maintenance.

FIRE SUPPORT TEAM

1-47. If assigned, the FIST is the critical link with the supporting artillery and is responsible for coordinating indirect fires (mortar, field artillery [FA], and close air support [CAS]) for the troop. The team processes calls for fire from the platoons and allocates the appropriate indirect-fire system based on the commander's guidance for fire support. The FIST can also assist the squadron/BCT with the employment of joint fires.

1-48. The FIST vehicle also may serve as the alternate troop CP. The FSO has ready access to the higher-level situation and the radio systems to replicate the troop CP if it becomes damaged or destroyed.

1-49. The FSO's additional responsibilities are—

- Advise the commander on the capabilities and current status of all available fire support assets.

- Serve as the commander's primary advisor on the threat's indirect fire capabilities.
- Assist the commander in developing the OPORD to ensure full integration of fires.
- Recommend targets and fire control measures, and determine methods of engagement and responsibility for firing the targets.
- Determine specific tasks and instructions required to conduct and control the fire plan.
- Develop an observation plan, with limited visibility contingencies, that supports the troop and higher headquarters missions.
- Request critical friendly zones (CFZ) to assist counterbattery fires in response to threat artillery and/or mortar attacks.
- Refine and integrate the troop target worksheet; submit the completed worksheet to the higher headquarters FSE.
- Assist the commander in incorporating execution of the indirect fire and target acquisition plan into each rehearsal. This includes integrating indirect fire observers into the rehearsal plan.
- In tactical situations, alert the commander if a request for fires against a target has been denied.
- In tactical situations, monitor the location and capabilities of friendly fire support units and assist the commander in clearance of indirect fires.

MORTAR SECTION SERGEANT

1-50. If assigned, the mortar section sergeant is responsible for providing responsive indirect fires to support the troop commander's concept of the operation. The section sergeant assists the commander in indirect mortar fire planning. He assists in establishing movement control, triggers for movement, triggers for shifting targets, and mortar caches. As a rule of thumb the section maintains two-thirds maximum range of mortar fire forward of the reconnaissance elements. The section sergeant is charged with maintaining discipline, conducting training, and exercising control over his mortar section. He supervises the section's CSS, which includes supply and equipment maintenance.

1-51. The mortar section sergeant's additional responsibilities are—

- Recommend employment techniques and positioning of the mortars to support the scheme of maneuver.
- Assist in developing the troop fire support plan; determine the best type and amount of mortar ammunition to fire, based on the factors of METT-TC.
- Train the section to ensure technical and tactical proficiency and combat lifesaver skills; cross-train personnel within the section on key tasks to ensure continuous operations.
- Select and reconnoiter new positions and routes for the section; control the movements of the section.
- Keep abreast of the threat situation and locations of friendly units to ensure the best use of ammunition and the safety of friendly troops.

- Supervise the execution of orders; ensure that priority targets are covered at all times; establish the amount and type of ammunition set aside for priority targets.
- Coordinate the fires and displacement of the mortar section with the action of other units.
- Anticipate needs and ensure timely ammunition resupply, maintenance, and refuel requests are submitted to sustain combat operations.

SUPPLY SERGEANT

1-52. The supply sergeant picks up, transports, and issues supplies and equipment to the troop. He works closely with the 1SG to accomplish these tasks. Using his position navigation (POSNAV) capability and established checkpoint data, he leads the logistics package (LOGPAC) to the linkup point; or if the situation dictates, moves it forward to the supported unit's location. He also evacuates EPWs and assists in the evacuation of soldiers who are killed in action to the mortuary affairs collection point.

COMMUNICATIONS SERGEANT

1-53. The communications sergeant assists in all aspects of tactical communications. He locates with the XO or 1SG per SOP and may operate the troop NCS. He receives and distributes signal operating instructions (SOI) and communications security (COMSEC) encryption keys. He ensures the troop receives the appropriate database for FBCB2, single-channel ground/airborne radio system–system improvement program (SINCGARS-SIP), enhanced position location reporting system–very high-speed integrated circuit (EPLRS-VHSIC), and other systems operating on the tactical internet. He ensures operators are properly trained in initialization and reinitialization of the systems and maintains the troop addressing and routing schemes. He troubleshoots troop digital communications equipment and ensures that necessary repairs are completed.

NUCLEAR, BIOLOGICAL, AND CHEMICAL NONCOMMISSIONED OFFICER

1-54. The troop NBC NCO is responsible for troop NBC defense activities. He supervises radiological monitoring, chemical detection, and decontamination operations. He assists in maintaining NBC equipment and training NBC equipment operators and decontamination teams. He operates from the troop CP and assists the XO in executing C2 operations. At this location, he advises the troop commander and XO on contamination avoidance measures, smoke, flame, and NBC reconnaissance support requirements. Additionally, he monitors reports of NBC attacks and advises the commander on their impact. He is the NBC expert and advises the commander in the employment of the NBC reconnaissance section/platoon, if the troop is augmented with this asset.

HUMAN INTELLIGENCE NONCOMMISSIONED OFFICER IN CHARGE

1-55. If assigned, the HUMINT NCOIC is responsible for the training of the HUMINT collectors. He advises the troop commander on the optimal utilization of the HUMINT collectors. He provides technical support and advice to the HUMINT collectors concerning HUMINT collection and reporting methodology. He reviews HUMINT reporting for format and completeness. He reviews HUMINT collector recommendations, identifying sources for further exploitation by the tactical HUMINT platoon of the MI

Company. He operates from the troop CP, acts as the troop intelligence oversight NCO, and is the point of contact with the S2X for technical support to HUMINT collection operations.

SECTION IV – OPERATIONAL ENVIRONMENT

1-56. During the Cold War, most nations patterned their doctrine after those of the two super powers. Consequently, many military operations around the world demonstrated a high degree of consistency. Standard reconnaissance tactics, techniques, and procedures (TTP) at that time focused on gaining information on the threat and terrain (doctrinal and situational templates). Foreign military forces are evolving differently today with states learning from US operations and incorporating adaptive military strategies within their professional militaries or paramilitary forces.

1-57. Threats recognize that defeating the US is not always a matter of winning battles, rather it is a factor of not losing operationally or tactically the military means necessary to remain in power, while pursuing strategic victory through other instruments. Systems and tactics to offset the effects of precision long-range air and missile attacks give an adversary operational freedom and a way to preserve his military capabilities. Potential adversaries are developing adaptive strategies and tactics to take advantage of emerging technologies to exploit perceived vulnerabilities and to counter or alleviate US strengths.

1-58. The US military is primarily a power projection force. It is tied to an operational construct requiring entry operations and a deliberate build-up of force capabilities for contingency response. Today, this strategy demands airfields and seaports in the AO, forward operating bases for air forces, significant in-theater logistical stockpiles, secure air and sea lines of communication (LOC), technical ISR capability as well as long distance communications for C2—all of which can be interdicted or denied to some degree.

1-59. From these perceptions, some common emerging trends appear for dealing with US forces—

- Development of capabilities to deny, limit, interrupt, or delay US entry and disrupt subsequent actions within the AO.
- Deliberate actions designed to create mass casualties.
- Employment of multiple means—political, economic, military, and informational—to undermine the coherence of alliances and coalitions.
- Offsetting US strengths by countering high-tech advantages, often with low-tech methods or specific “niche” capabilities.
- Adoption of unpredictable operational methods with rapid transition to conventional operations when decision is assured.
- Conducting technical exploitation of C2 nodes, networks and systems.
- Increasing standoff distances through exclusion or other means to protect forces and capabilities.

- Maintaining and preserving viable conventional military capabilities to destroy threat forces, secure territory, and maintain regime security.

BATTLEFIELD FRAMEWORK

1-60. The capability of potential threats to US forces requires recognition that the modern battlefield will have many complexities. This will lead to situations where future conflicts will conform to the linear battlefield framework or a nonlinear battlefield framework, or a combination of both linear and nonlinear characteristics.

1-61. In order to better understand and define the battlefield framework, certain concepts can be applied to most situations (linear and nonlinear) that define the relationship between friendly forces, their support forces, the threat, and space. The organization of the battlefield into identifiable constructs assists the commander in better visualizing and describing the battlespace and anticipating threat actions.

1-62. This is not a doctrinal template but a tool to assist the commander in visualizing and describing the battlefield. Units will develop situational templates and decision support templates based on their IPB and military decision-making process (MDMP).

LINEAR AND NONLINEAR BATTLESPACE

1-63. Categories used in defining and evaluating the battlespace include the following:

- **Linear operations** are military operations that develop along a secure line from a base toward an objective and are characterized by an easily definable front and rear. Orientation of the majority of the force is in one general direction, defined as the front, normally facing the threat and/or the objective. During linear operations, the flanks of units are normally protected by other units, natural terrain features, or manmade obstacles.
- **Nonlinear operations** are military operations that seek to complete a mission, with no secure connection to a base and no easily defined front and rear, are nonlinear. Orientation of the force is determined by the location of the immediate threat or the objective. In most cases, units in a nonlinear environment rely on movement, deception, cover, and concealment to provide protection for potentially exposed elements.
- **Contiguous operations**. Most military operations embrace the idea that operational forces should be contiguous. This ensures that, across an area of responsibility (AOR), all the geography is accounted for. In other words, some unit or level of command has responsibility to control military operations in that zone of action.
- **Noncontiguous operations** are more problematic. In practice, units may be assigned noncontiguous zones of action, with the next-higher headquarters assuming responsibility for the areas between the assigned zones. Only in the most extreme cases will a military commander accept areas of the battlefield over which no unit has responsibility, allowing

threat forces sanctuary and freedom of action. One possible reason would be if there was such a terrain feature so forbidding that military operations are extremely unlikely.

- **Combinations**. Based on the above, there are identifiable combinations of battlespace:
  - Linear contiguous.
  - Nonlinear contiguous.
  - Linear noncontiguous.
  - Nonlinear noncontiguous.

1-64. An analysis would indicate that the first two combinations are the most valuable in terms of tactical applications, with the last two used only in very special circumstances. Based on this, linear operations are geographically based, have an easily definable front and rear across the entire force, and typically produce proportional effects and an expected measurable result. Nonlinear operations are force- or systems-based, have no easily defined front or rear across the force, and produce disproportionate, often unpredicted effects. *In both instances, military necessity requires a contiguous force deployment, except in special cases.*

ORGANIZING THE BATTLEFIELD

1-65. Threat forces will organize and define their battlespace by using *areas of responsibility*. An AOR is a clearly defined geographic area with associated airspace. An AOR is bounded by a *limit of responsibility* (LOR) beyond which the unit may not operate or fire without coordination through the next-higher headquarters. AORs may be linear or nonlinear in nature (see Figures 1-11 and 1-12 for an example of each type of AOR). Linear AORs may contain subordinate nonlinear AORs and vice versa.

1-66. AORs consist of three basic zones: *battle*, *disruption*, and *support*. An AOR may also contain one or more *attack* and/or *kill* zones. Zones may be linear or nonlinear in nature. The size of these zones depends on the size of the threat forces involved, engagement ranges of weapon systems, the terrain, and the nature of the threat's operation. Within the AOR, the threat will normally identify two additional types of control lines. The *support line* separates the support zone from the battle zone. The *battle line* separates the battle zone from the disruption zone.

1-67. An AOR is not required to have any or all of these zones in any particular situation. A particular command might have a battle zone and no disruption zone. It might not have a battle zone if it is the disruption force of a higher command. If it is able to forage, it might not have a support zone.

1-68. The various zones in an AOR have the same basic purposes within each type of offensive and defensive action. Thus, the threat organizes the battlefield in a way that can facilitate rapid transition between offensive and defensive actions and between linear and nonlinear operations. This flexibility helps the threat use adaptive techniques to gain tactical and operational advantages and create or exploit windows of opportunity that support their strategic goals.

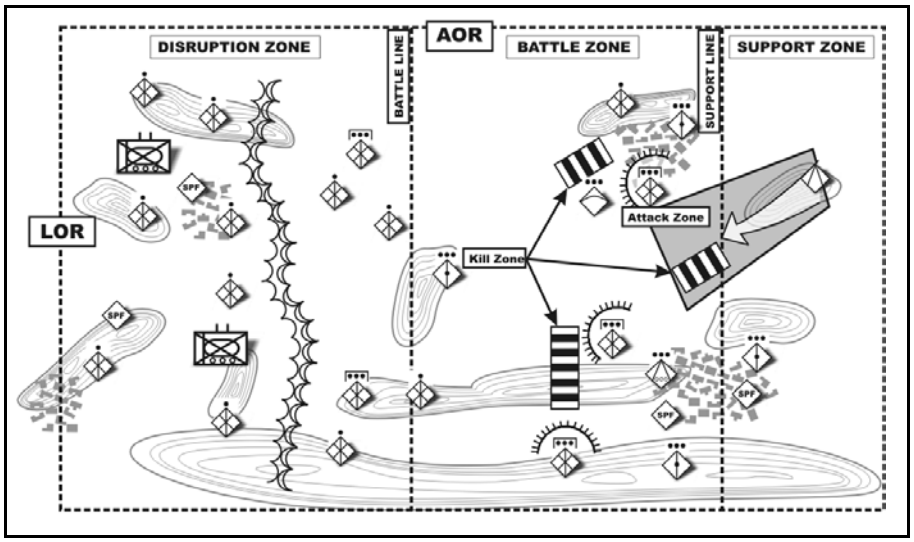


Figure 1-11. Example Linear Area of Responsibility

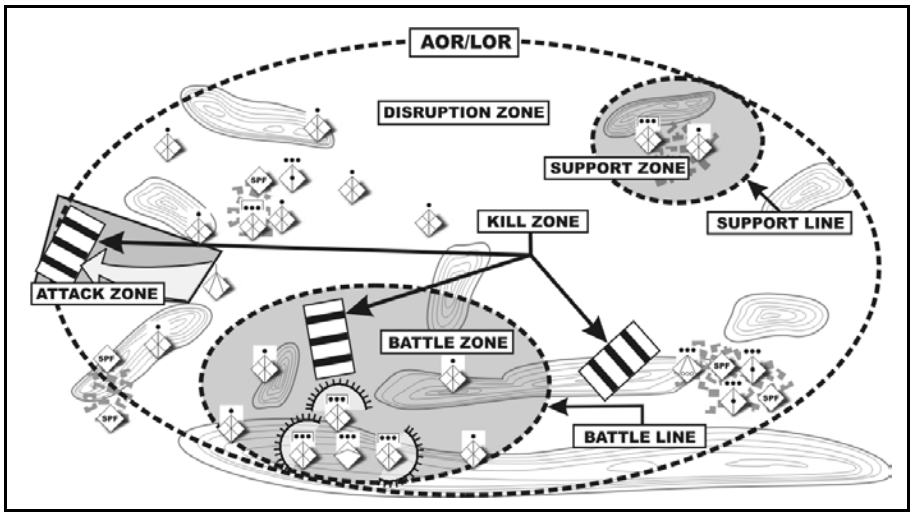


Figure 1-12. Example Nonlinear Area of Responsibility

DISRUPTION ZONE

1-69. The disruption zone is where the threat will set the conditions for successful combat actions by fixing friendly forces and placing long-range fires on them. Units in this zone begin the attack on specific components of the friendly combat system, to begin the disruption and neutralization of that system. Successful actions in the disruption zone will create a window of opportunity that is exploitable in the battle zone. For example, attacking friendly engineer elements can leave his maneuver force unable to continue effective operations in complex terrain, exposing them to destruction by forces in the battle zone. Units in the disruption zone also destroy friendly reconnaissance assets while denying the ability to acquire and engage threat targets with deep fires. Disruption zones may be contiguous, noncontiguous, or "layered."

1-70. In the offense, the disruption zone is that battlespace in which the threat seeks to use direct and indirect fires to destroy the integrity of friendly forces and capabilities without decisive engagement. In general, this zone is the space between the battle line and the LOR. In linear operations, it typically begins at what the threat anticipates the friendly forward edge of the battle area (FEBA) is and extends to the threat LOR. The boundaries of the disruption zone will move forward during the course of a battle. The higher commander can push the disruption zone forward or outward as forces adopt a defensive posture while consolidating gains at the end of a successful offensive battle and/or prepare for a subsequent offensive battle.

BATTLE ZONE

1-71. The battle zone is where the threat will engage the friendly forces in close combat to achieve a tactical decision. Forces in the battle zone will exploit opportunities created by actions in the disruption zone. The linkage of these tactical successes to the operation plan allows the accomplishment of operational objectives.

1-72. In the offense, the battle zone is that battlespace in which the threat seeks to fix and/or destroy friendly forces through simultaneous or sequential application of all elements of combat power. The dimensions of this zone are based on threat objectives and the time-space relationships for the forces involved.

1-73. Threat forces operating in the battle zone engage friendly forces in close combat to achieve a specific tactical objective. This objective is typically one of the following:

- Create a penetration in the friendly defense through which exploitation forces can pass.
- Draw friendly attention and resources to the action.
- Seize terrain.
- Inflict casualties on a vulnerable friendly unit.
- Prevent a part of the friendly force from moving to impact threat actions elsewhere on the battlefield.

1-74. In the nonlinear attack, multiple battle zones may exist, and within each a certain task would be assigned to the threat unit assigned to operate in that space. The tasks given to the units that operate in the zone can range from demonstration to attack. The battle zone provides the commander of those units the battlespace in which to frame his combat actions.

SUPPORT ZONE

1-75. The support zone is that area of the battlespace designed to be free of significant friendly action and to permit the effective logistics and administrative support of threat forces. Security forces will operate in the support zone in a combat role to defeat friendly special operations forces (SOF). Camouflage, concealment, cover, and deception measures will occur throughout the support zone to protect the force from standoff RSTA and precision attack. A support zone may be dispersed within the support zones of subordinate units or it may be separate from subordinate AORs. The support zone may be in a sanctuary that is noncontiguous with other zones of the AOR.

ATTACK ZONE

1-76. An attack zone is given to a subordinate unit with an offensive mission to delineate clearly where forces will be conducting offensive maneuver. Attack zones are often used to control offensive action by a subordinate unit inside a larger defensive battle or operation.

KILL ZONE

1-77. A kill zone is a designated area on the battlefield where the threat plans to destroy a friendly target, system, or unit. A kill zone may be within the disruption zone or the battle zone. In the defense, it could also be in the support zone.

OBJECTIVES AND AXES

1-78. An objective is a geographic location or physical object, the seizing and/or holding of which is a goal of an offensive battle. An axis is a control measure showing the location through which a force will move as it proceeds from its starting location to its objective.

FIRING LINES

1-79. Firing lines will be established on common graphics to facilitate coordination of direct fire. Firing lines, which are positions from which to engage friendly forces, typically have some inherent advantage such as concealment.

ORGANIZING FORCES FOR THE OFFENSE

1-80. There is no doctrinal order of battle (OB). Units will develop OBs for specific threat forces based on intelligence provided through IPB and MDMP. The organization of forces described here is a general concept that can assist the commander in visualizing and describing threat forces relative to friendly forces' locations and actions and their relationship in time and space on the battlefield. This organization of forces can shift dramatically during the course of a battle or operation, if part of the plan does not work or works better than anticipated (see Figure 1-13).

DISRUPTION FORCE

1-81. In the offense, the disruption force would include the disruption force that already existed in a preceding defensive situation. It is possible that forces assigned for actions in the disruption zone in the defense might not have sufficient mobility to do the same in the offense or that targets may change and require different or additional assets. Thus, the disruption force might require augmentation.

FIXING FORCE

1-82. Threat offensive operations are focused first on the concept of fixing friendly forces so that they are not free to maneuver. In the offense, the threat commander will identify which friendly forces need to be fixed and the method by which they will be fixed. They will then assign this responsibility to a force that has the capability to fix the required friendly forces with the correct method. The fixing force may consist of a number of units separated from each other in time and space, particularly if the friendly forces required to be fixed are likewise separated.

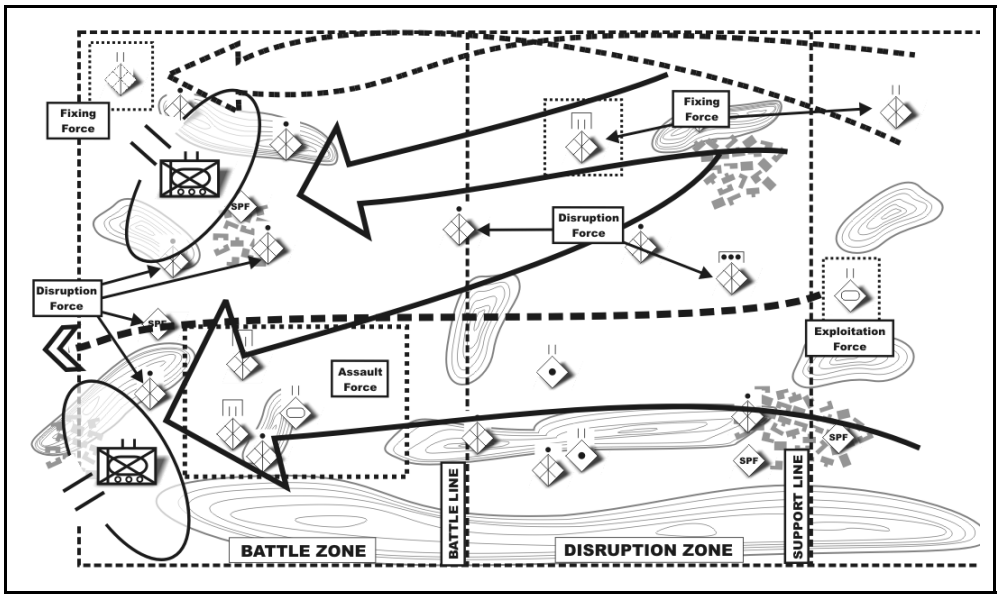


Figure 1-13. Example Offensive Operation

ASSAULT FORCE

1-83. The assault force is tasked with creating the conditions that allow the exploitation force the freedom to operate. In order to create a window of opportunity for the exploitation force to succeed, the assault force may be required to operate at a high degree of risk and may sustain substantial casualties. However, an assault force may not even make contact with the threat, but instead conduct a demonstration.

EXPLOITATION FORCE

1-84. The exploitation force is assigned the task of achieving the objective of the mission. It typically exploits a window of opportunity created by the assault force.

RESERVE

1-85. At the commander's discretion, forces may be held out of initial action so that he may influence unforeseen events or take advantage of developing opportunities. The size and composition of a reserve is entirely situation-dependent.

ORGANIZING FORCES FOR THE DEFENSE

1-86. There is no doctrinal order of battle. Units will develop an order of battle for specific threat forces based on intelligence provided through IPB and MDMP processes. The organization of forces described here is a general concept that can assist the commander in visualizing and describing threat forces relative to friendly forces locations and actions and their relationship in time and space on the battlefield. This organization of forces can shift dramatically during the course of a battle or operation, if part of the plan does not work or works better than anticipated (see Figure 1-14).

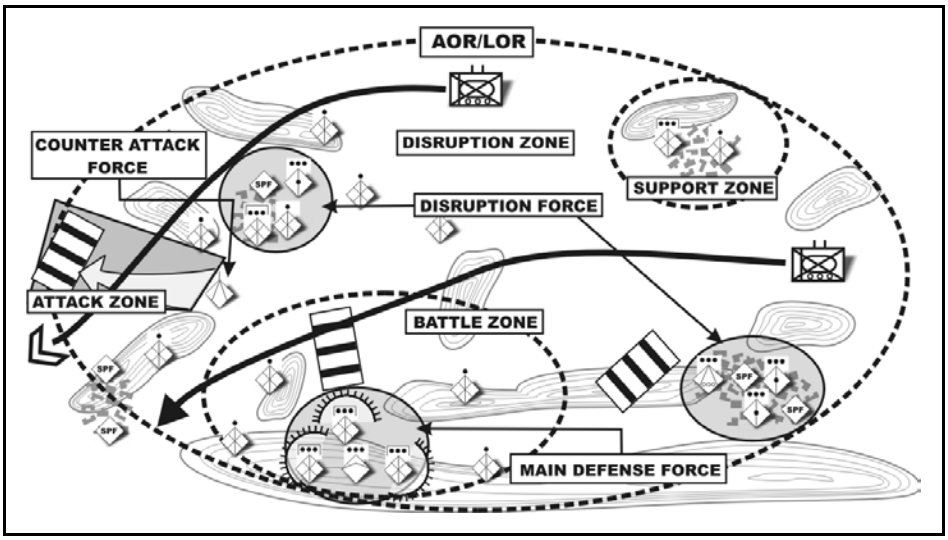


Figure 1-14. Example Nonlinear Defense

DISRUPTION FORCE

1-87. The size and composition of forces in the disruption zone depends on the level of command involved, the commander's concept of the battle, and the circumstances in which the unit adopts the defense. A tactical commander will always make maximum use of stay-behind forces and affiliated forces existing within his AOR. However, a disruption force has no set order of battle. It may contain—

- Ambush teams (ground and air defense).
- Long-range reconnaissance patrols and/or special purpose forces (SPF).
- RSTA assets and forces.
- Counterreconnaissance detachments.
- Artillery systems.
- Target designation teams.
- Elements of affiliated forces (such as terrorists, insurgents, criminals, or special police).

1-88. The purpose of the disruption force is to prevent friendly forces from conducting an effective attack. Skillfully conducted disruption operations will effectively deny friendly forces the synergy of effects of his combat system. The disruption force may also have a counterreconnaissance mission. It may selectively destroy or render irrelevant friendly ISR forces and deny him the ability to acquire and engage targets with deep fires. The disruption force may deceive friendly forces as to the location and configuration of the main defense in the battle zone, while forcing him to show his intent and deploy early. Some other results of actions in the disruption zone can include delaying to allow time for preparation of the defense or a counterattack, canalizing friendly forces onto unfavorable axes, or ambushing key systems and vulnerable troop concentrations.

MAIN DEFENSE FORCE

1-89. The main defense force is the element charged with execution of the defensive mission. It operates in the battle zone to accomplish the purpose of the defense (destroy, preserve, or deny).

PROTECTED FORCE

1-90. In a defense to preserve, the protected force is the force being kept from harm by covering or delaying forces. It may be in the battle zone or the support zone.

SECURITY FORCE

1-91. The security force is charged with protecting the entire AOR from attack by partisans, guerillas, insurgents, terrorists, covert operatives, and SPFs. The security force may be separate from the counterreconnaissance detachment or have some command or support relationship with it.

COUNTERATTACK FORCE

1-92. A defensive battle may include a planned counterattack scheme. This is typical of a maneuver defense, but could also take place within an area defense. In these cases, the tactical commander will designate one or more counterattack forces. He will also shift his task organization to create a counterattack force when a window of opportunity opens that leaves friendly forces vulnerable to such an action. The counterattack force can have within it fixing, assault, and exploitation forces (as outlined above). It will have the mission of causing the offensive operation of friendly forces to culminate. The tactical commander uses counterattack forces to complete the defensive mission and regain the initiative for the offense.

RESERVE

1-93. The size and composition of a reserve force is entirely situation-dependent. However, the reserve is normally a force strong enough to respond to unforeseen opportunities and contingencies at the tactical level. A reserve may assume the role of counterattack force. Reserves are almost always combined arms forces.

ORGANIZING FORCES FOR TACTICAL SECURITY

1-94. The threat employs various types of forces in tactical security roles. The exact task organization depends on the situation and the force to be protected.

1-95. If the commander chooses to have one organization responsible for all tactical security in his AOR, these duties fall to the security force. There is no set organization for the security force, but its sub-elements will be security detachments (SD). A security force is typically formed when the types and number and separation of anticipated security actions require a single responsible commander and planning staff.

SECURITY DETACHMENT

1-96. Detachments formed to undertake tactical security actions are SDs. An SD may be formed for and given any security mission. Most commonly, they are formed as part of a tactical movement.

SECURITY ELEMENT

1-97. Security elements (SE) are task-organized company- or platoon-size forces operating as part of a detachment. They execute an independent tactical security task, such as protecting the flank or rear of a moving force or providing local security while the rest of the detachment executes the mission.

COMBAT SECURITY OUTPOSTS

1-98. Combat security outposts (CSOP) are task-organized platoon- or squad-size forces that provide local security to forces in battle positions or assembly areas. They prevent reconnaissance or small groups from penetrating positions and force the threat to deploy and lose his momentum in the attack.

COUNTERRECONNAISSANCE DETACHMENT

1-99. The counterreconnaissance detachment (CRD) is focused almost entirely on friendly reconnaissance, while other security forces have the mission to protect from other types of friendly units and action as well. The commander has great flexibility in determining the size and composition of his CRD and its relationship with the security force, if formed.

FIGHTING PATROL

1-100. Fighting patrols (FP) have a security function as well as a reconnaissance function.

ORGANIZING FORCES FOR TACTICAL MOVEMENT

1-101. Some of the task organizations associated with tactical movement also play roles on other types of combined arms tactics. For example, SDs and SEs provide security during tactical movement and in other situations. FPs perform reconnaissance missions during tactical movement and in other situations in which the threat force is not in direct contact with the enemy. The main body contains forces organized in the same manner as during the offense. Figure 1-15 below shows an example of the possible deployment of various forces within a unit during tactical movement.

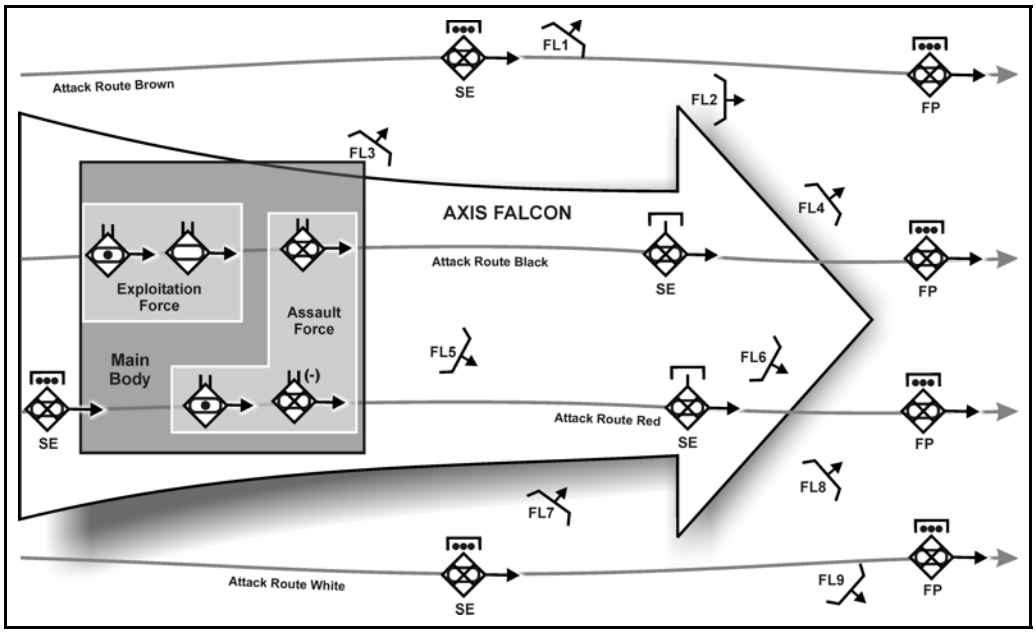


Figure 1-15. Tactical Movement Control Measures and Example Forces

SECURITY DETACHMENT

1-102. An SD is a task organized battalion or company with the mission of protecting the moving force from direct fire and other forms of contact and from being fixed by threat action. The SD is typically also the fixing force in an offensive action. The SD will be further organized into SEs to facilitate providing all-around security.

SECURITY ELEMENT

1-103. An SE is a company- or platoon-size force that operates as part of an SD. SEs are typically charged with providing the moving force with protection from friendly action originating from a particular area along the axis (they may be designated as a "front," "flank," or "rear" SE).

FIGHTING PATROLS

1-104. A moving force will use as many FPs as the commander's analysis deems necessary to facilitate situational awareness and freedom of movement along each attack route.

MAIN BODY

1-105. The main body consists of the assault, exploitation and supporting forces of the attacking unit.

SCOPE OF OPERATIONS

FULL-SPECTRUM OPERATIONS

1-106. The full-spectrum operations include offensive, defensive, stability, and support operations. Offensive and defensive missions normally dominate MTWs and some SSCs. Stability and support missions are conducted in SSC operations, peacetime military engagements

(PME), and to a lesser extent in MTW. Missions in any environment require brigades to conduct or be prepared to conduct any combination of these primary operations. Reconnaissance troops assigned to BCTs are trained and equipped to support these operations. While the Army's heavy brigades are optimized for operations in an MTW, they retain the ability to conduct SSC operations. The SBCT is organized and equipped to rapidly deploy to SSC operations, but is capable of conducting MTW operations if reinforced.

MAJOR THEATER OF WAR CHARACTERISTICS

1-107. MTWs have the greatest potential of occurring in regions containing moderate to well-developed infrastructure (especially roads, rail, and bridges), complex and urban terrain with large urban areas, and diverse weather patterns. The most dangerous potential threat remains those forces with the capacity to conduct full-scale combat operations. Threat military capabilities common to an MTW will comprise high-end industrial and information-age forces. They are characterized by both heavy and mechanized forces as well as motorized/light infantry, mass precision artillery and rocket forces, large numbers of antitank weapons, extensive air defense systems down to shoulder-fired systems, and antimissile and antistealth systems with access to space-based command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR) capabilities. They possess advanced fixed-/rotary-wing aviation assets, and will be capable of achieving at least local air superiority to support tactical operations. Most threats capable of initiating an MTW possess weapons capable of mass destruction. SPFs, state-controlled terrorist organizations, and paramilitary forces will be part of a strategy of simultaneous, distributed operations within the AOI and AO.

1-108. Threat forces will seek ways to manipulate the commanders' trust in the authenticity of data, information, and knowledge. They will attempt to take away the collaboration that leads to SU (a key component of information superiority). They will seek to disrupt the time-phased force deployment at aerial ports and seaports of debarkation, attack CSS assets and elements throughout the AO, and affect the BCT's lines of communications. Present and future trends indicate the acquisition of more sophisticated and advanced technology; greater, more capable and secure C3; and increased use of urban areas for operating bases and for sanctuary.

SMALLER-SCALE CONTINGENCY CHARACTERISTICS

1-109. Historically, SSCs like those in Panama, Haiti, and Kosovo have occurred in regions with weak infrastructure (especially roads, rail, bridges), complex terrain with large urban areas, and diverse weather patterns. Humanitarian issues, such as overpopulation, resource shortages, natural disasters, and inadequate local, regional, and global response capabilities, complicate operations in these areas. Threats in these environments usually contain mid- to low-end industrial-age forces characterized by limited heavy forces, mainly equipped with small numbers of early generation tanks, and some mechanized but mostly motorized infantry. There is a pervasive presence of guerilla, terrorist, paramilitary, SPF, special police, and militia organizations. These forces are equipped with man-portable air defense systems (MANPADS),

antitank guided missiles (ATGM), mortars, mines, explosives, and machine guns. There are limited fixed- and rotary-wing aviation assets. These forces can be expected, however, to have robust communications utilizing conventional military devices augmented by commercial equipment such as cell phones.

PEACETIME MILITARY ENGAGEMENT CHARACTERISTICS

1-110. A PME encompasses all military activities that involve other nations and are intended to shape the security environment in peacetime. PMEs include programs and exercises that the US military conducts with other nations to shape the international environment, improve mutual understanding with other counties, and improve interoperability with treaty partners or potential coalition partners. Operations in support of PMEs are normally interagency in character and are designed to address the fundamental causes of instability that can lead to regional conflict. A PME further serves to demonstrate US resolve to allies and adversaries alike, conveying democratic ideals and civilian-military relationships, and helping to relieve sources of instability.

Chapter 2

Battle Command

CONTENTS

The Art of Command 2-2
The Elements of Command 2-2
Battle Command Methodology 2-2
Command and Control 2-6
The Command and Control System 2-6
Command and Control Procedures 2-8
Troop-Leading Procedures 2-12
Communications 2-28
Digitization 2-31
ABCS Components 2-31
ABCS Communications Links 2-31
FBCB2 2-33
CHAT (Cavalry Squadron RSTA) 2-38
Security 2-38
Techniques of Tactical Control 2-38
Planning Process 2-38
Reporting Process 2-39
FM Versus Digital Communications 2-39

Battle command is the exercise of command in operations against a hostile, thinking opponent. It combines leadership and the art and science of battlefield decision making to motivate soldiers and organizations into action to accomplish missions. Battle command entails visualizing the operation, from start to finish and formulating a concept of operation to get from the current state to the desired end state. It also includes assigning missions, prioritizing and allocating resources, selecting the critical time and place to act, and knowing how and when to make adjustments in the fight.

Battle command of the reconnaissance troop is typically decentralized due to the size of the AO and the nature of reconnaissance missions. Operating widely disbursed over extended space places the burden of sound, timely decision making at the lowest levels. Accurate and timely reconnaissance, reporting, and communications techniques are essential for the troop, and ultimately the BCT, to be successful. Integration of command and control, communications, computer technology, and intelligence (C4I) increases the effectiveness of battle command and makes accurate and timely decisions possible.

Battle command is a continual and sequential process that begins in the planning phase and continues through the consolidation phase. This chapter outlines the digital tools and techniques a troop commander needs to effectively command and control his unit in combat. It also addresses aspects of situational awareness, planning, and C2 procedures in a digital environment. The purpose of this chapter is to:

- Define the art of command.
- Describe the command and control system.

- Describe the communications and digital systems associated with troop command and control.
- Describe troop techniques for a commander to effectively command and control his unit during operations.

SECTION I – THE ART OF COMMAND

2-1. Command and control are interrelated. Command resides solely with the commander; it consists of authority, troop leading, and leadership. Control is how the commander executes command. This section will discuss the following:

- The elements of command (authority, troop leading, and leadership).
- The battle command methodology (visualize, describe, direct, and lead).
- The role of the commander.

THE ELEMENTS OF COMMAND

2-2. The elements of command are the following:

- **Authority.** Authority is the delegated power to judge, act, or command. It includes responsibility, accountability, and delegation.
- **Troop-leading.** This element allows the commander to select a course of action as the one most favorable to accomplish the mission and translate it into clear, concise instructions. It applies the commander's intuition, knowledge, judgment, experience, intellect, boldness, perception, and character to translate his vision into action. It includes knowing when and what to decide, and understanding the consequences of decisions. After the commander has made his decision he must lead the troop in its execution. He leads by example and by direction, positioning himself where he can best command without depriving himself of the ability to respond to changing situations.
- **Leadership.** Commanders exercise leadership by influencing others. To do this, they provide purpose, direction, and motivation while taking actions to accomplish the mission and improve the organization. Commanders must lead through a combination of example, persuasion, and compulsion.

BATTLE COMMAND METHODOLOGY

2-3. **Visualize**, **describe**, **direct**, and **lead** make up the commander's methodology for executing battle command. The commander uses this process to visualize the battlespace, describe the visualization to subordinates, direct actions to achieve results, and lead the troop to mission accomplishment. This process combines the art of command with the science of control for the troop commander. For the troop commander,

battle command presents unique challenges in the conduct of planning for, preparing, and executing reconnaissance and security missions. The nature of reconnaissance and security missions calls for decentralized operations conducted over large areas and led by subordinate leaders.

VISUALIZE

2-4. This is the process of achieving a clear understanding of the troop's current state with relation to the threat and the environment, developing a desired end state that represents mission accomplishment, and determining the sequence of activities that moves the troop from its current state to that end state. The commander begins to visualize the desired end state when he receives a mission or perceives a change in the mission. As he analyzes the mission, he applies his current situational understanding to develop a mental image of his forces in relation to the threat, the environment, and the end state. The commander must update and validate his visualization during preparations as the results of feeds from higher ISR operations become available. He must determine whether new information (on threat forces, friendly forces, or the environment) validates his plan, requires him to adjust the plan, or invalidates his plan. The commander's visualization is his assessment tool throughout the operation, and he should focus on three main factors:

- **Understand the current state of friendly and threat forces.** This is *situational understanding,* derived from applying the commander's judgment, experience, expertise, and intuition to the COP. The SU includes physical factors, human factors, and the relationships between friendly and threat forces and the environment—seeing the battlefield—that represent potential opportunities or threats for the troop (see Figure 2-1).
- **Foresee a feasible outcome.** The commander must identify a feasible outcome to the operation that results in mission success and leaves the troop prepared for future missions and tasks.
- **Visualize the dynamics between opposing forces.** The commander must identify the dynamics throughout the sequence of actions. This includes evaluating possible threat reactions and his counteractions. This evaluation may lead to the identification of possible triggers throughout the operation.

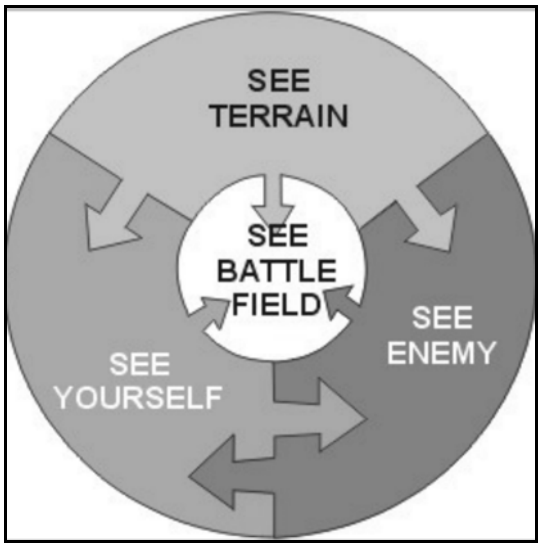


Figure 2-1. Seeing the Battlefield

DESCRIBE

2-5. The commander describes his visualization during the planning, preparation, and execution phases of operations. Specifically, he follows the troop-leading procedures and uses orders to provide his commander's intent and communicate his decision for execution. He must apply his judgment, experience, expertise, and intuition before making a decision and describing that decision to subordinates. During preparation, the commander uses confirmation and back briefs to ensure his subordinate leaders understand his vision, their tasks, and how the execution of their tasks support his end state.

2-6. During execution, the commander uses FM updates, leader huddles, FBCB2, and when the situation requires a significant change in the troop's execution, he uses FRAGOs to describe changes to the troop's situation, threat disposition or the unforeseen effects of terrain or civil-military aspects on the execution of the mission and achievement of the end state. This is the commander's ability to concisely communicate complex actions in time and space and translate them into understandable and actionable tasks to subordinates. FBCB2 is an effective tool to communicate changes or describe the changing environment. It provides a common view of friendly and known threat activities and locations and affords the commander the ability to verbally and visually depict the situation as he understands it.

DIRECT

2-7. Once he has made a decision, the commander directs operations by communicating the decision to his subordinates through an order. Direction occurs during all phases of an operation.

Planning

2-8. Clear direction is essential to mission success; however, commanders must strike a balance between detailed directions and mission-oriented instructions. The commander should assign only the minimum graphical, written, or procedural control measures (permissive

or restrictive) necessary to provide essential coordination and prevent platoons from impeding one another. Orders (warning order [WARNO], OPORD, fragmentary order [FRAGO]) must enable subordinates to understand their situation, their commander's mission and intent, and their own mission.

Preparation

2-9. The commander directs changes to his plan based on feeds from on-going ISR operations. He uses rehearsals to ensure synchronization of tasks and triggers to events and PCIs to ensure completion of precombat checks (PCC) and other preparations.

Execution

2-10. The nature of operations at the troop level requires the commander to directly influence the action. The art of command requires commanders to know when the plan must change, what criteria point toward a need for changes, and then determining what required changes will get the maximum effectiveness from the troop. He must be capable of rapid analysis of the tactical situation and be able to make quick decisions. The commander exercises judgment and initiative continuously, assessing the situation and making decisions, often with incomplete, conflicting, and vague information. The commander uses the COP to update his visualization and ensure that his platoons and elements execute appropriate measures for the actual situation. He must synchronize his subordinates' activities and integrate his troop's actions with his higher headquarters. The commander directs these actions primarily through a FRAGO.

SUPPORT TO HIGHER HEADQUARTERS BATTLE COMMAND

2-11. The reconnaissance troop supports its higher headquarters in the battle command process by—

- Facilitating the commander's ability to **visualize** the operation by answering information requirements (IR and CCIR) and providing detailed information on the terrain, infrastructure, society, and threat (components of METT-TC) in his AO.
- Defining portions of METT-TC to allow the commander to **describe** the operation with his intent and specified tasks to his subordinates.
- Assisting the commander's ability to **direct** forces by facilitating situational awareness (SA) and contributing to the brigade's SU.

BATTLE COMMAND ASSESSMENT

2-12. The assessment continues the process of visualize, describe, direct, and lead. The troop commander must continually assess the current situation in the context of—

- Changes to the higher mission or higher commander's intent.
- Changes to the threat situation or unanticipated threat actions.
- The effects of terrain and weather on operations.
- The effects of noncombatants on current operations.

SECTION II – COMMAND AND CONTROL

THE COMMAND AND CONTROL SYSTEM

> ***Command and control*** *is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission.*

2-13. The C2 system is the arrangement of personnel, information management, procedures, equipment, and facilities (command posts) essential to the commander to plan, prepare, execute, and assess operations. The system supports the commander's exercises of command and control by three basic functions:

- Creating and maintaining the common operational picture.
- Supporting troop leading by improving its speed and accuracy.
- Supporting preparation and communication of execution of information.

2-14. At the troop level, the C2 system consists of integrating—

- Key personnel.
- SOPs for information management.
- FBCB2 and FM communications.
- The troop CP.

PERSONNEL

2-15. The troop C2 system begins with the key leaders. No technology can reduce the importance of the human dimension. The duties and responsibilities of key personnel were described in the first chapter. The commander must train his personnel in the performance of these duties, foster a command climate that encourages initiative, and create a cohesive chain of command. It is the commander's responsibility to consider and apply the capabilities and characteristics of his personnel—their strengths and weaknesses—when delegating authority and assigning tasks during operations.

INFORMATION MANAGEMENT

2-16. Information management consists of five activities: **collecting**, **processing**, **storing, displaying**, and **disseminating information**. In practice, these activities overlap, effectively complementing one another within the C2 system.

Collecting

2-17. Collecting is the continuous acquisition of relevant information about METT-TC through ISR operations. The troop collects information through reconnaissance and direct observation to answer higher headquarters IR and CCIR. These requirements may be revised throughout the operation as the situation becomes clearer or changes.

2-18. The term ***relevant information*** refers to all information of importance to the troop commander and to the higher headquarters in the exercise of command and control. For the troop commander, relevant information for the higher headquarters is categorized into the CCIR and IR. Relevant information must be accurate, timely, usable, complete,

precise, and reliable to answer the questions that dictate the successful execution of military operations. This ensures that the commander is not overburdened by the sheer volume of information, rather that information is provided that enables situational understanding and decision making.

Processing

2-19. Processing covers the activities required to convert data or information to knowledge or intelligence that supports situational awareness. It includes organizing, collating, plotting, and arranging data and information to create and maintain the COP, as well as analysis and evaluation to support SA and SU. Considerations include the following:

- **Common operational picture** is a single display of relevant information within a commander's/leader's area of interest. This information is a display of information such as status charts, overlays, and friendly and threat icons. This display can be analog (such as a map with acetate overlay) or digital (FBCB2 display). Echelons create the COP by collaborating, sharing, and tailoring information. The COP allows collaborative interaction and real-time sharing of information among the commander and his troop leadership and the higher commander and his staffs.
- **Situational awareness** is the ability to maintain a constant, clear *mental picture* of relevant information and the tactical situation. Simply stated, situational awareness answers the question *what is the effect of terrain, the friendly situation, and the threat situation*. Since the troop normally operates dispersed, with its platoons and their individual sections conducting decentralized operations, all recce leaders must maintain situational awareness so they can make sound, quick tactical decisions. The troop assesses and reports relevant information within their AOs to fulfill their primary responsibility of assisting their higher headquarters in maintaining the COP.
- **Situational understanding** requires the commander to apply his experience, professional knowledge, and intuition based on the factors of METT-TC to the COP. Simply stated, situational understanding answers the question ***what it means***. Situational understanding enables the commander to "visualize" his battle space in both real time and in the future.

Storing

2-20. Storing retains information in any form, as written message forms or log entries, or filed reports within the common system database, for orderly and timely retrieval when needed. Information is stored because not all information collected or processed can be displayed at the same time, nor is it relevant at all times.

Displaying

2-21. Displaying presents information in a usable, easily understood audio or visual form tailored to the requirements of the commander that conveys the COP. The troop CP uses standard formats to organize the display and assist the user in finding the needed information. Graphic

overlays displayed on FBCB2, or map overlays, aid communications and understanding by using doctrinal terms, graphical conventions, and standardized formats for presenting information to convey complex concepts. Displays should allow the commander to communicate directions to subordinates in a manner that quickly and concisely portrays his intend, specified tasks, and desired end state. Graphic information should:

- Display symbols, graphics, and terminology consistent with FM 1-02 [FM 101-5-1].
- Display relevant information accurately, reliably, and timely.
- Change easily as information is updated.
- Allow rapid dissemination to higher, lower, and adjacent units.

Disseminating

2-22. Disseminating is communicating information of any kind from one person or place to another in a usable form by any means to improve understanding or to initiate or govern action. Information systems (INFOSYS) are the equipment and facilities that collect, process, store, display, and disseminate data and information. This includes computers, hardware and software, and communications as well as the policies and procedures for their use. The systems include the ability to access analytical expertise and databases through reach-back to army, national, and civilian institutions. Enhanced FM and digital communications (FBCB2) and other C2 systems in the troop portray relevant information to enable the troop leadership to better visualize their battlespace. These systems integrate standard threat information (location, composition, and disposition) with multidimensional aspects such as the psychological, physical, allegiance, intent, and infrastructure that must be considered.

COMMAND AND CONTROL PROCEDURES

2-23. C2 procedures provide effective guidelines for planning and preparing both analog and digital units for operations. Techniques for utilizing digital systems to aid in the execution of these procedures are included in this discussion.

MISSION-ORIENTED COMMAND AND CONTROL

2-24. This C2 method provides the maximum latitude to subordinates, encouraging initiative, and assisting them in taking action consistent with the troop commander's intent and concept. Mission-oriented C2 requires a clear understanding by subordinate leaders of the troop's purpose; at the same time, it provides them with the freedom to react to or exploit threat actions without further guidance.

Expect Uncertainty

2-25. The commander must understand the combat environment. The operation is dynamic and the threat uncooperative. Communications may be degraded, and the chaos of battle may prevent the commander from knowing what is happening beyond the reach of his own senses. The situation the unit anticipates during the planning phase will inevitably change before and during execution.

Reduce Leader Intervention

2-26. When soldiers expect the commander to make every decision or initiate every action, they may become reluctant to act. To counter this tendency, the commander must plan and direct operations in a manner that requires a minimum of intervention. He operates on the principle that some loss of precision is better than inactivity.

2-27. The commander must provide subordinates with the guidance and direction when precise control is required for synchronization. During the planning process, he should identify those few critical decisions that are absolutely required during the operation and then determine the criteria to trigger the actions associated with these decisions. Examples include the engagement criteria, bypass criteria, disengagement criteria, reconnaissance handover, or passage of lines.

Optimize Planning Time for Subordinates

2-28. The commander must ensure that the timeline he develops for mission planning and preparation provide adequate troop-leading time for subordinate leaders. He should use time management tools such as backwards planning, published preparation timelines, parallel planning, and delegation of troop-leading tasks to the XO and 1SG when applicable.

Allow Maximum Freedom of Action for Subordinates

2-29. Given the expected battlefield conditions, leaders at every level must avoid placing unnecessary limits on their soldiers' freedom of action. The leader at the point of decision must have the knowledge, training, and freedom necessary to make the correct choice in support of the commander's intent. Soldiers win battles; their leaders can only place them in a position where they are able to seize the opportunity to do so. Subordinates are successful on the battlefield when their commanders and leaders have fostered the necessary confidence and initiative before the battle begins.

Encourage Cross-Talk

2-30. Subordinate leaders should not always have to communicate through their commander to adjacent units, target acquisition teams (such as COLTs), GSR teams, IREMBASS teams, or other supporting elements. In some instances, because of their position on the battlefield, two or more subordinates, working together, may have the clearest view of what is happening and may be better suited than the commander to develop a tactical solution. Direct coordination between subordinate elements to solve a problem or respond to unforeseen situations, is critical to mission-oriented command and control.

Command and Lead Well Forward

2-31. The commander positions himself where he can best command and control his troop and make critical decisions to influence the outcome of the mission. This position is normally forward to allow the commander to exert his leadership and to shift or retask the troop or attached assets as necessary. He must be far enough forward to "see" the battlefield using all available resources he must maintain communication with higher and subordinate elements either directly or through his CP to maintain situational awareness and visualize the battlefield; these assets include

not only visual observation but also radio reports and, in digitized units, information provided over digital systems.

PLANS AND ORDERS

2-32. Plans are the basis for any mission. The troop commander develops his concept of the operation summarizing how best to accomplish his mission within the scope of his higher commanders' intents (two levels up). The troop commander uses troop-leading procedures to turn the concept into a fully developed plan and to prepare a clear, concise OPORD. He assigns additional tasks (and outlines their purpose) for subordinate elements, allocates available resources, and establishes priorities.

2-33. The foundation of all orders is the troop mission statement and the commander's intent. The commander must have a thorough understanding of the relationship between the mission statement, his intent, and the concept of the operation and train his subordinates to understand the relationship as well. The commander normally uses three types of orders to prepare for, direct, and adjust operations:

- Warning orders.
- Operations order.
- Fragmentary orders.

Mission Statement

2-34. The commander uses the mission statement to focus the troop on the objective of the upcoming operation. This statement (sometimes a single sentence) describes the type of operation, the troop's task, and the purpose for the troop's immediate operation. It is written in a format based on the five "Ws": *who* (unit), *what* (tasks), *when* (date-time group), *where* (grid location/geographical reference for the AOs and/or objective), and *why* (purpose). The commander must ensure that the mission is thoroughly understood by all leaders and soldiers two echelons below (section or squad).

2-35. Tactical tasks are specific activities performed by the unit while it is conducting a form of tactical operation or a choice of maneuver. The tasks should be definable, attainable, and measurable. Critical tasks that require specific TTPs for the troop are covered in detail throughout this publication.

2-36. A simple, clearly stated purpose improves understanding of the commander's intent. It will also assist subordinate leaders in adjusting their tasks during execution of the mission, allowing them to stay within the parameters of the higher commander's intent. The purpose should tell the subordinates **why** the troop is conducting the mission.

Commander's Intent

2-37. The commander's intent is a clear, concise statement that provides the link between the mission statement and the concept of the operation. Intent is normally expressed in four to five sentences, but can also be in bullet form, and describes the **key tasks** that are essential to the mission and the commander's desired end state for the mission. He *may* also identify the **decisive point** for the mission and *may* explain a **broader purpose** for the operation in relation to his higher headquarters beyond that outlined in the mission statement. The intent also includes

the conditions the force meets to achieve the stated purpose (**end state**). The intent provides the basis for subordinates to exercise initiative when unanticipated opportunities arise or when the original concept of the operation no longer applies.

2-38. **Key Tasks.** Key tasks are not tied to a specific course of action (COA); rather, they identify actions or conditions that are fundamental to the unit's success. By identifying these "mission essential" tasks, the commander emphasizes to his subordinates that during the operation, someone must execute them regardless of who was assigned to the task in the order. This allows leaders to anticipate assumption of a key task if the assigned unit is unable to accomplish it.

2-39. **End State.** The end state expresses the required conditions that, when achieved, attain the objective for the operation. The commander must ensure that he does not describe a set of conditions that conflict with accomplishment of key tasks or mission accomplishment. The end state is defined as the relationship of the troop to one or several of the following criteria: the tempo, duration, effect on the threat, effect on another friendly force's operation, or key terrain.

2-40. **Decisive Point.** The commander may identify the decisive point for the operation. This reinforces the mission's objective. The decisive point may be a geographic location, a threat force or civilian organization, or an event within the operation.

2-41. **Purpose.** The commander may expand on the purpose for the operation, but this is not a restatement of the **why** (purpose) from the mission statement. Instead, he looks beyond the purpose of the immediate operation to describe the purpose within the broader context of the higher commander's mission and intent.

Combat Orders

2-42. Combat orders are the means by which the troop commander receives and transmits information, from the earliest notification that an operation will occur through the final phases of execution. In a tactical situation, the commander will receive the troop's mission from higher in the form of written, digital (sent on FBCB2), or verbal WARNO, OPORD, or FRAGO. The commander must take every opportunity to train the troop in the use of combat orders, as the skills associated with orders development and dissemination is highly perishable.

2-43. **Warning Order.** During the planning phase of an operation, commanders use WARNOs as a method of alerting their subordinate leaders. Warning orders also initiate the commander's most valuable time-management tool, the collaborative and/or parallel planning process. The troop commander usually receives a series of WARNOs from his higher headquarters to initiate troop-leading procedures and preparations prior to receipt of the OPORD. He must issue at least one WARNO, if not more depending on the factors of METT-TC, to his subordinate leaders to help them prepare for new missions. The directions and guidelines in the WARNO allow subordinates to begin their own planning and preparation activities.

2-44. The content of WARNOs is based on two major variables: information about the upcoming operation that is available to the troop from the higher headquarters and what the troop commander ultimately

wants to achieve by issuing the WARNO (what he wants his subordinates to do with the information). The commander normally issues his WARNO as he completes his own analysis of the situation or as he receives additional orders from his higher headquarters.

2-45. In addition to alerting the unit to the upcoming operation, WARNOs allow the commander to put out tactical information incrementally and, ultimately, to shorten the length of the actual OPORD. As a result, when he issues the OPORD, he can simply review previously issued information or brief the changes or earlier omissions. He will then have more time to concentrate on visualizing his concept of the fight for his subordinates.

2-46. **Operation Order.** The commander issues his OPORD as part of his troop-leading procedures. He does not need to repeat information covered previously in his WARNOs. The commander may also issue an execution matrix, either to supplement the OPORD or as a tool to aid in the execution of the mission.

2-47. **Fragmentary Order.** The FRAGO is used to implement timely changes to, or provide pertinent extracts from, existing orders. During the execution of an operation, FRAGOs are the medium of battle command. The troop commander uses them to communicate changes in the threat or friendly situation and to retask his subordinate elements based on changes in the situation.

2-48. A FRAGO follows the five-paragraph OPORD structure; however, it includes only the information required for subordinates to accomplish their mission. To enhance understanding of verbal FRAGOs, digitally equipped units can quickly develop hasty graphics and transmit digital overlays. The FRAGO normally includes the following information:

- Updated threat or friendly situation that describes the reason(s) for the changes.
- If necessary, changes to the troop mission.
- If necessary, changes to the commander's intent.
- Changes to the concept of the operation, to include fires.
- Changes to platoon and other supporting elements' tasks and/or purposes.
- Coordinating instructions, as necessary.
- Changes to CSS, as necessary.
- Changes to command and signal, as necessary.

TROOP-LEADING PROCEDURES

2-49. Leaders of company/troop and smaller units use troop-leading procedures to develop plans and orders (refer to FM 5-0 [FM 101-5]). The eight troop-leading steps are generally performed concurrently rather than sequentially. In addition, some steps such as initiate movement, issue the warning order, and conduct reconnaissance may recur several times during the process. Although listed as the last step, activities associated with supervising and refining the plan and other preparations may occur throughout the troop-leading process.

2-50. The commander uses backwards planning based on the time constraints prior to mission execution to determine how much time is

devoted to each step and whether steps are performed concurrently. The commander must understand how to perform the procedures within the time constraints. Digital information systems (such as FBCB2, enhanced position location reporting procedures [EPLRS], and appliqué) are valuable tools for performing troop-leading procedures. These systems allow the commander to communicate information quickly and accurately.

2-51. The commander considers the factors of METT-TC throughout the procedures to update his visualization of the battlefield and his plan continuously, based on additional information from his higher headquarters and ongoing ISR operations by other sources.

STEP 1 – RECEIVE AND ANALYZE THE MISSION

2-52. Troop-leading procedures normally commence upon receipt of a mission from the higher headquarters either through a WARNO or OPORD. **As a minimum, the commander should receive his commander's guidance for reconnaissance that includes the focus, tempo, and engagement criteria. For a security mission, he should also receive destruction and displacement criteria (see Chapters 3 and 4 for descriptions of commander's guidance).** The commander may also initiate troop-leading procedures upon anticipation or identification of a new mission during an ongoing operation.

Confirm and Clarify the Mission

2-53. The troop commander gives a confirmation brief to his commander to confirm his understanding of the higher commander's guidance, intent, and/or specified tasks. He obtains clarification on aspects of the order based on his initial METT-TC analysis, confirming information about the terrain and the friendly and threat situations, as necessary. If necessary, he conducts initial coordination with adjacent and supporting elements. Additionally, he conducts time analysis using backwards planning, if necessary develops his initial security plan, and alerts the troop to the upcoming mission.

Analyze the Mission

2-54. The commander conducts mission analysis using the factors of METT-TC. Mission analysis is a continuous process. The commander constantly receives information (during the planning phase, or en route to the reconnaissance objective) and must decide if the information affects his mission. If it does, he then decides how to adjust his plan to meet this new situation. METT-TC is not necessarily analyzed sequentially. How and when the commander analyzes each factor depends on when information is made available to him.

NOTE: The acronym METT-TC is a common mnemonic device for the factors of mission analysis. The following discussion presents these elements in the traditional order (mission, enemy, terrain and weather, troops and support available, time available, and civil considerations). Mission is always the first factor to be analyzed. The second factor in the analysis, however, should be terrain rather than the enemy. By analyzing the terrain first, the leader gains a clear picture of factors that influence the enemy situation; this enables him to develop a better understanding of the enemy's capabilities and limitations.

2-55. **Mission Analysis.** After receiving an essential task and purpose, either in a WARNO or the OPORD, the commander can begin the analysis of his own mission. He may use a refined product, such as the modified combined obstacle overlay (MCOO) and/or the situation template (SITEMP) (if available) to better visualize the interrelationships of the terrain, threat, and friendly forces. His goal in this analysis is to clarify what the unit is to accomplish, why the unit is to accomplish it, and how to achieve its overall purpose.

2-56. **Analysis of higher-unit mission and intent.** Leaders at every echelon must have a clear understanding of the intent and concept of operation of the commander two levels higher. Once he understands the operation two levels up, the commander can analyze the troop mission. Key considerations in this analysis include the following:

- **Purpose.** Identify the troop's purpose. Determine how the troop's purpose relates to the purposes of the brigade and/or its other troops in the squadron and attached elements.
- **Specified tasks.** What tasks does the OPORD specify for the troop to accomplish?
- **Implied tasks.** What tasks not specified in the OPORD must the troop execute to successfully accomplish its specified tasks?
- **Essential tasks.** What essential tasks specified in the OPORD must be accomplished for mission success? Are any implied tasks essential? What specific results must the troop achieve in terms of the terrain and the threat and/or friendly forces?
- **Limitations.** What limitations does the OPORD place on the troop's freedom of action?

2-57. **Restated mission**. The commander writes his restated mission, ensuring that it includes the five "W"s: *who*, *what*, *when, where*, and *why*. If the unit must accomplish more than one essential task, they are listed as on-order missions in the order in which they will occur.

2-58. **Enemy Analysis.** The commander must apply his own analysis to the intelligence products provided by his higher headquarters. As an example, the S2's SITEMP might identify the location of CSOPs, OPs and other forces in the disruption zone, and platoon-size battle positions (BP) on the objective area with templated generic weapons range lines. This is useful information on how the enemy may look when the BCT is in the close fight and engaging the enemy on the objective, but it is probably not what the enemy will look like when reconnaissance and surveillance assets are engaged in reconnaissance and surveillance to confirm that specific threat COA. The commander must refine the SITEMP to anticipate contact with enemy forces in the disruption zone, and how the enemy will look in and around the objective area during the reconnaissance phase of the operation. This refinement focuses on known or templated vehicle(s) or vehicle positions, known or templated obstacles, intervisibility lines that influence known or templated enemy vehicles around the objective area.

2-59. Based on the operational environment described in the intelligence products, the commander further evaluates and refines the enemy situation to identify the enemy's most likely objective or end state within the troop's and higher's AO and the feasible threat COAs or civil

options that enable him to achieve his objective. If possible, he identifies what factors or events would cause the enemy to select one course of action over another. He identifies the possible movement and/or positioning of high payoff targets that he may encounter within the threat COA. He should identify the capabilities and weaknesses of the threat forces within the order of battle that he expects to encounter based on the current threat composition and disposition. He identifies the strengths and weaknesses of unconventional forces that he may encounter to include paramilitary forces, militia, police, and/or criminal organizations.

2-60. **Terrain and Weather Analysis.** The commander focuses not only on the impact of terrain and weather on the troop and other friendly forces, but also on how they will affect threat operations. The commander normally must prioritize his analysis of the terrain and weather based on time constraints that influence orders development at the troop level.

2-61. **Terrain analysis.** The higher headquarters provides the troop with a MCOO, which depicts the physical effects of the battlefield on military operations. If the MCOO is focused primarily on identifying just unrestricted, restricted, and severely restricted terrain, the troop commander must further refine it to his level using the **five military aspects of terrain: observation and fields of fire, cover and concealment, obstacles, key terrain, and avenues of approach (OCOKA)**. In the absence of a MCOO, the troop commander should develop his own product.

2-62. *Observation and fields of fire*. The commander must determine what locations along each avenue of approach provide clear observation and fields of fire for both the attacker and the defender. He analyzes the area surrounding key terrain, objectives, and obstacles. He locates intervisibility lines and assesses their impact on his ability to obtain information requirements or acquire targets.

2-63. In analyzing fields of fire, the commander focuses on the ability of friendly and threat units to cover terrain with direct fires from known or likely positions. In addition, he must identify positions that afford clear observation, allowing them to employ indirect fires effectively.

2-64. *Cover and concealment*. The commander looks at the terrain, foliage, structures, and other features on the avenues of approach to identify sites that offer cover and concealment. In a security mission, antitank (AT) weapon and vehicle positions must be both lethal and survivable, with effective cover and concealment just as vital as clear fields of fire.

2-65. *Obstacles*. In analyzing the terrain, the commander first identifies existing and reinforcing obstacles that may limit mobility (affecting such features as objectives, avenues of approach, and mobility corridors) and affect the troop's countermobility effort.

2-66. *Key terrain*. Key terrain is any location or area whose seizure, retention, or control affords a marked advantage to either combatant. At the troop level, the commander must assess what terrain is key to his mission accomplishment. An example of key terrain for a troop conducting a zone reconnaissance could be a small hill that overlooks a threat's reverse slope defense.

2-67. Designation of an area as key terrain depends largely on the characteristics of the avenue of approach (such as the width or length and the restrictiveness of terrain along the avenue) and the size of the unit required controlling it. Other contributing factors include maneuver space, fields of fire, and cover and concealment afforded by the key terrain itself. For example, a vantage point overlooking where several mobility corridors or trails converge may be key terrain for a troop.

2-68. The troop commander may also identify decisive terrain, which is key terrain that will have an extraordinary impact on the mission. Decisive terrain is relatively rare; it will not be present in every situation. By designating terrain as decisive, the commander recognizes that seizing and/or retaining it is an absolute requirement for successful accomplishment of the mission.

2-69. *Avenues of approach.* These are areas through which a unit can maneuver. The definition of an avenue of approach is an area that provides sufficient ease of movement and enough width (for dispersion) to allow passage of a force large enough to significantly affect the outcome of the battle. In turn, avenues of approach are composed of mobility corridors, which are areas through which the force will be canalized by terrain features and constrictions. If not identified by the higher headquarters, the troop commander can use the following process to identify avenues of approach:

- Identify mobility corridors.
- Categorize each corridor by the size or type of force it will accommodate.
- Group mobility corridors to form avenues of approach.

2-70. The commander must identify mounted, dismounted, and air avenues of approach within the AO. Mounted forces may move on avenues along unrestricted or restricted terrain (or both). Dismounted avenues and avenues used by reconnaissance elements normally include restricted terrain and, at times, severely restricted terrain. In addition, the terrain analysis must identify avenues of approach for both friendly and threat units.

2-71. After identifying avenues of approach, the commander must evaluate each avenue. He determines the size and/or type of force that could use the avenue and evaluates the terrain that the avenue traverses as well as the terrain that bounds or otherwise influences it.

2-72. **Weather analysis.** Consideration of the effects of weather conditions is an essential part of the mission analysis. The commander should review the results of his terrain analysis and determine the impact of the following factors on terrain, personnel, and equipment and on the projected friendly and threat COAs.

2-73. *Light data.* At what times are beginning of morning nautical twilight (BMNT), sunrise, sunset, end of evening nautical twilight (EENT), moonrise, and moonset? Is the sun to the back of friendly forces or the threat? What effect will this have on either force's ability to see? Will friendly forces have to remove or install driver's night periscopes during movement? When during the operation will they have to use night-vision goggles? What effect will long periods of darkness (such as during winter nights) have on soldiers' ability to stay awake and alert?

2-74. *Precipitation*. How will precipitation affect the terrain along each avenue of approach? Will some restricted terrain become severely restricted if it rains or snows? Will moist air cause foggy conditions? Will lack of precipitation cause extremely dusty conditions? How will fog, dust, or stormy conditions affect visibility?

2-75. *Temperature*. What will the temperature be during the operation and what effect will this have on soldiers? Will they be able to sustain a long fight in extreme conditions? Will the ground freeze or thaw during the operation? What effect will this have on trafficability? How will extreme heat or cold affect the optical images in the vehicle sights? Are temperature dispersions favorable for the use of smoke or chemicals?

2-76. *Wind speed and direction*. What is the expected wind speed and direction during the operation? What effect will wind conditions have on use of smoke, flares, or chemical agents? Will the wind affect dust, fog, and other battlefield conditions?

2-77. *Visibility*. How will weather conditions (including light conditions, precipitation, temperature, and wind speed and direction) affect visibility? Will friendly forces have the sun in their eyes? Will the wind blow dust or smoke away from the route of march (making it easier to see) or back toward friendly forces? Under such conditions, what is the maximum observation range? How will that range affect the threat?

2-78. **Troop Analysis (Troops and Support Available).** Analyze the combat readiness of soldiers and equipment task organized to the troop. Direct subordinate leaders to outline the readiness status of their elements; if possible, inspect each element to verify readiness. Compile updates of each vehicle's maintenance, fuel, ammunition, and personnel status. Determine the anticipated readiness status, as of the time the operation is to start, of vehicles and equipment that are currently non-mission-capable (NMC). To accomplish its reconnaissance and target acquisition tasks, the commander should especially consider the status of special equipment: batteries (e.g. night observation devices [NOD], position locator grid reference [PLGR], ground/vehicle laser locator designator [G/VLLD], and mini eye-safe laser infrared observation set [MELIOS]), to include resupply and recharging, and communications (e.g. FBCB2, satellite communications, FM, and AM).

2-79. **Time Analysis.** Backward planning and development of a detailed timeline are essential in framing the troop-leading procedures. Identify the specific and implied times governing actions that must occur throughout the planning, preparation, and execution phases of the operation. Assess the impact of limited visibility conditions (including darkness) on the troop-leading process and other time-sensitive preparations for the troop and its subordinate elements (see Figure 2-2). Analyze the timing for the execution phase in terms of the terrain and threat and friendly forces.

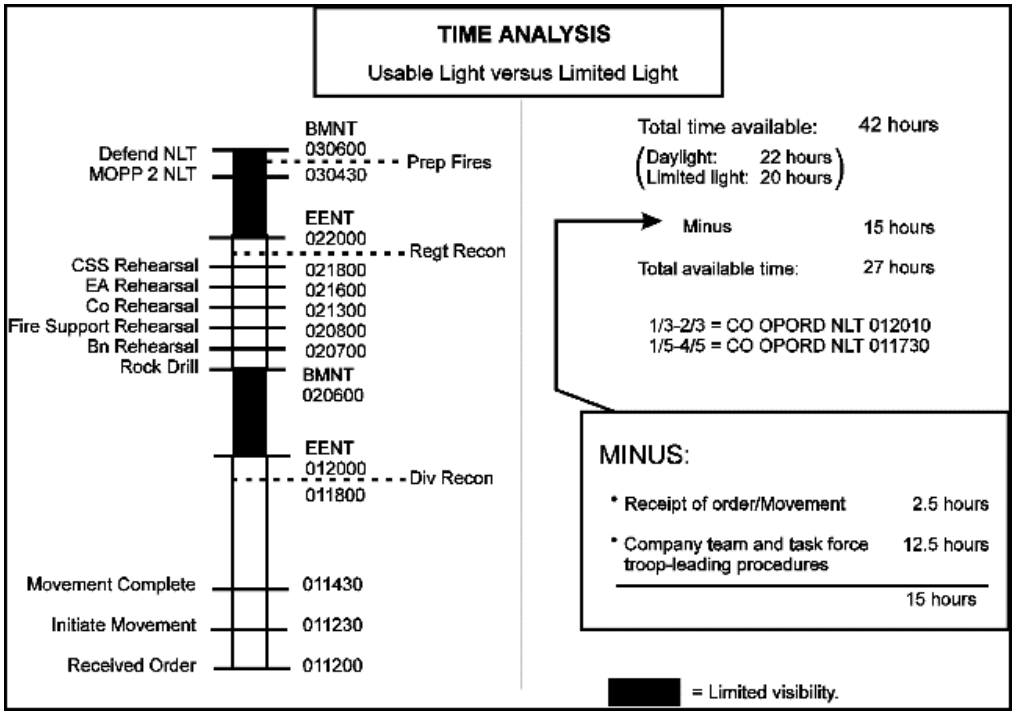


Figure 2-2. Use of Time Analysis to Assess Light Conditions for an Operation

2-80. **Analysis of Civil Considerations.** Identify any civil considerations and specific considerations related to the applicable rules of engagement (ROE) and/or rules of interaction (ROI) that may affect the troop mission. The commander uses the higher headquarters description of the operational environment as applicable to—

- Understand the civilian environment to include ethnicity, cultural distinctions, religious beliefs, political affiliations, needs of society, and attitude towards US forces.
- Identify the impact of urban infrastucture that supports the inhabitants, the government, and the economy on troop operations within his AO.
- Determine the impact that civilians may have on operations to include distinguishing threat forces from the local populace, impeding unit movement, interfering with or preventing use of weapon systems increased security measures or readiness conditions, and the impact of civilian casualties on the local populace and troop personnel.

STEP 2 – ISSUE THE WARNING ORDER

2-81. This step is normally conducted concurrently with other steps. Based on time constraints and other METT-TC factors, the commander may issue several WARNOs during troop-leading procedures (see Table 2-1). Troop WARNOs are given verbally or transmitted over FBCB2 and allow subordinate leaders to plan and prepare for the operation prior to the receipt of the OPORD. The commander should not delay issuing the order while awaiting additional information; likewise, he should not

withhold needed information, even if it is somewhat incomplete. He can send updates as needed using subsequent WARNOs.

2-82. The first WARNO may be issued after the commander has confirmed and clarified his mission, to include an initial METT-TC assessment. It alerts the troop to the upcoming mission and may provide a preparation timeline for the operation. A subsequent WARNO may be issued after the commander completes his mission analysis. It provides the threat and friendly situation, the restated mission, and additional preparation instructions. An additional WARNO may be issued after the commander has developed his tentative plan. It provides his intent, course(s) of action, and task planning or rehearsal priorities for his platoons and other attached elements.

Table 2-1. Commander's Use of Multiple Warning Orders

TROOP COMMANDER'S ACTION	POSSIBLE CONTENT OF WARNING ORDER	COMMANDER'S PURPOSE
Receive the brigade or squadron WARNO.	First WARNO should cover the following: ▪ Proposed mission statement. ▪ Security plan. ▪ Movement plan. ▪ Task organization. ▪ Tentative timeline. ▪ Standard drills to be rehearsed.	▪ Prepare platoons for movement. ▪ Focus the troop on the new mission. ▪ Specify troop task organization.
Conduct the mission (METT-TC) analysis.	Second WARNO may cover the following: ▪ Friendly situation. ▪ Threat situation. ▪ Terrain analysis. ▪ Troop mission.	▪ Initiate platoon-level mission analysis. ▪ Initiate mission-specific rehearsals (drill- and task-related). ▪ Prepare for combat.
Develop a tentative plan.	Third WARNO may cover the following: ▪ Commander's intent. ▪ Concept of the operation. ▪ Concept of fires. ▪ Subordinate unit tasks and purposes. ▪ ISR guidance. ▪ Updated SITEMP and operations graphics.	▪ Initiate platoon-level COA development. ▪ Identify platoon-level ISR requirements. ▪ Direct reconnaissance. ▪ Prepare for combat.

STEP 3 – MAKE A TENTATIVE PLAN

2-83. The commander continuously updates the COP and his situational understanding using information and intelligence feeds from his higher headquarters and ongoing ISR operations. The commander develops his course of action (tentative plan) based on—

- His commander's reconnaissance guidance.
- His commander's intent.
- Tasks assigned by his higher headquarters.
- Feasible threat COAs.

- His understanding of the terrain, enemy, and other relevant METT-TC factors.

2-84. The commander compares troop and threat combat power, weapon systems, and other combat multipliers to identify strengths and weaknesses to avoid or exploit and how the threat may react to his actions. He links his information requirements and target acquisition tasks to the reconnaissance focus, tempo, and engagement criteria. The commander visualizes the end state and the scheme of maneuver required to achieve that end state.

2-85. The commander develops a scheme of maneuver that provides flexibility to respond to all feasible threat COAs. The scheme of maneuver should address—

- Cueing by external ISR assets (e.g., signal intelligence, image intelligence) using sensors to make first contact with threat forces.
- Changes to the reconnaissance tempo during different events based on mission timelines and anticipated threat dispositions, compositions, and reactions.
- Dismounted and mounted operations to reflect reconnaissance objectives, tempo, and engagement criteria.
- Positioning assets that provide redundant and mixed coverage of named areas of interest (NAI) and other locations to answer information requirements.
- Development or refinement of the fire support plan to support the scheme of maneuver.
- Positioning of assets to acquire targets and execute assigned fire support tasks.
- Integration of attached combat elements into the scheme of maneuver.
- Communications requirements.
- Control measures to support the troop's maneuver and reduce the risk of fratricide.
- Integration of CSS assets to support mission accomplishment.

2-86. The commander completes his draft intent and concept of the operation, and identifies his information requirements that will enable him to complete his plan. He determines what information is required and the latest time the information is of value. He forwards requests for information (RFI) to his higher headquarters for answers. The higher headquarters may direct its ongoing sensor and aerial reconnaissance to answer the troop's RFIs.

STEP 4 – INITIATE MOVEMENT

2-87. This step is normally done concurrently and repetitively with other steps in the troop-leading procedures. The commander initiates any movement that is necessary to continue preparations or to posture the unit for the operation. This may include movement to a screen, an assembly area, or an attack position; movement of task organized or supporting elements (such as mortars or GSR); or movement to compute time-distance factors for the unit's mission.

STEP 5 – CONDUCT RECONNAISSANCE

2-88. Reconnaissance allows the commander to refine and complete his plan. The reconnaissance includes both the commander's personal reconnaissance and the results of ongoing external ISR operations. If circumstances permit, subordinate leaders should accompany the commander. This allows them to see as much of the terrain as possible. It should also help each leader to visualize the tentative plan and any related branch plans more clearly.

2-89. The reconnaissance may include movement to or beyond the line of departure (LD) or a drive from the FEBA back to and through the security zone along likely threat routes. If possible, the commander should select a vantage point that provides the best possible view of the troop AO.

2-90. The commander uses the results of external ISR operations to augment his personal reconnaissance. These operations should answer the commander's information requirements (RFIs) submitted previously to—

- Make first contact with threat forces.
- Confirm threat defensive positions and locate possible gaps in the defense to support infiltration.
- Reconnoiter infiltration lanes to identify threat positions.
- Locate obstacles or barriers along lanes or routes.
- Identify threat forces positioned in the vicinity of reconnaissance objectives or NAIs.
- The commander uses the results of his reconnaissance and external reconnaissance to complete his plan.

STEP 6 – COMPLETE THE PLAN

2-91. The commander adjusts his scheme of maneuver based on ISR results and conducts limited war gaming to complete his plan. He assesses the impact of "on-order" and "be-prepared" missions. He then prepares his OPORD for issue.

Conduct Limited War Gaming

2-92. The commander conducts limited war gaming against the feasible threat COAs to complete his plan. He conducts threat action/reaction as he determines how the troop accomplishes each task. The commander considers actions during mission execution to the expected forms of contact: visual, physical (direct fire), indirect fire, threat or unknown obstacles, threat or unknown aircraft, NBC conditions, electronic warfare, and nonhostile. As a minimum, the plan should address—

- Task and purpose to subordinate elements that support mission accomplishment.
- Task organization changes and specific tasks that attachments must conduct to support mission accomplishment.
- How the troop will maneuver based on the reconnaissance objective, terrain, and threat disposition.
- How the troop is cued and gains contact based on external ISR operations.

- If applicable, movement of the mortar section or other fire-support assets to maximize and maintain fires forward of the scouts.
- Primary and alternate responsibilities for target acquisition and triggers to support essential fire support tasks or other missions.
- Effect and purpose for each fire support/target acquisition task.
- Graduated response in accordance with the ROE/ROI.
- Graphic control measures that facilitate control and flexibility.
- Coordinating instructions.
- Combat service support activities to include casualty evacuation, resupply, cache, and vehicle maintenance and recovery.
- Communications plan to include methods to maintain communications with higher headquarters and between mounted and dismounted elements, and to integrate supporting analog elements into the digital network.

2-93. After concluding the war-gaming process, the commander completes the final refinement and writes the order.

Begin Bottom-up Refinement

2-94. This process includes developing refinements, additions, and deletions to the higher headquarters plan and submitting them to the appropriate member of the squadron/brigade staff. For example, if the fire support plan allocates a smoke target to screen troop movement, the commander may discover during war gaming that the target is not in a correct position to support the troop. He would then coordinate a change to the target list.

Finalize CSS Integration

2-95. With limited CSS assets available to the troop, the commander may be required to submit requests for additional support or changes to the higher headquarters CSS plan. This includes (but is not limited to) the location of unit casualty and maintenance collection points, times when troop assets will occupy them, routes to higher CSS sites, and security procedures for CSS assets.

Finalize Graphics

2-96. If necessary, the commander adds troop graphics to the higher headquarters overlay. (**NOTE:** One technique is to use a different color to distinguish the troop's operational graphics from existing higher headquarters' graphics.)

Prepare the OPORD

2-97. The troop commander finalizes his orders products. Examples of these products include—

- The SITEMP.
- Supporting plans, including those covering higher ISR, maneuver, fire support, and CSS.
- Operational graphics.

- Visualization products, such as maps, overlays, sketches, models, and matrices.

2-98. The commander must decide how these products will be produced and distributed to the troop's subordinate elements. One technique is to employ personnel from the troop CP and headquarters section in production and distribution tasks, such as building terrain models and copying graphics or matrices. The commander must also establish a quality control system to ensure that all products are complete and accurate.

2-99. Based on time constraints, the commander determines the order format that best describes and presents the concept of the operation to subordinate leaders. The commander may decide to use a five-paragraph, matrix, or overlay format based on his unit's SOP. The commander must ensure that the order is not only clear and complete, but also as brief as possible. Information covered adequately in WARNOs need not be addressed within the OPORD.

STEP 7 – ISSUE THE ORDER

2-100. The OPORD should precisely explain, both verbally and visually, the commander's intent, providing enough information to ensure that all subordinate elements work toward the desired end state. When the commander has finished issuing the order, subordinate leaders should walk away with a clear visualization of what he expects their element to do.

Location and Time

2-101. The commander should select a location from which to issue the OPORD that is secure and will help enhance understanding of the order. An ideal site, when time and security factors allow, is one that overlooks the AOs. If he must issue the order during limited visibility, he chooses a location (such as inside the troop CP) that allows subordinates to see visual materials clearly.

Presentation Techniques

2-102. During the orders briefing, the commander may make use of the visual materials developed earlier to help paint the picture of how he sees the fight unfolding. Subordinates will better comprehend complex ideas and situations with the aid of a sketch, diagram, or model. The commander should further ensure that subordinates keep their maps, with graphics posted, on hand for reference. As noted, he may furnish copies of the written order (or a summary of key details). He then must present the plan clearly and logically, providing only updates (not complete restatement) of items he has covered in earlier WARNOs.

2-103. Additionally, if the unit is FBCB2 capable, the order and graphics can be sent to key leaders prior to the orders brief and allow subordinates the ability to begin analyzing the mission and their specific tasks prior to the order's issue.

STEP 8 – SUPERVISE AND REFINE

2-104. The best plan may fail if it is not managed effectively and efficiently. Throughout the troop-leading process, the commander must continue to refine the plan, conduct coordination with adjacent units, and

supervise combat preparation and execution. Inspections and rehearsals are critical elements of this step.

Combat Zone Training

2-105. During continuous combat operations, units at all levels should have either formal or informal combat zone training programs to convert new ideas into actual practice. This allows soldiers to practice a variety of skills that will enhance their protection and endurance during extended combat. For example, after receiving his mission, the troop commander should assess the troop's proficiency in the individual, leader, and collective tasks required for the upcoming mission. If he feels the troop, or a subordinate element, cannot perform a task properly, he can then conduct precombat training during the planning and preparation phases.

Inspections

2-106. Inspections allow the commander to check the troop's operational readiness. The key goal is to ensure that soldiers and vehicles are fully prepared to execute the upcoming mission. Inspections also contribute to improved morale. The entire troop chain of command must know how to conduct PCC and PCI in accordance with applicable unit SOPs and guidelines from the troop mission training plan (MTP).

Additional Preparation Tasks

2-107. To assure himself of adequate time to focus on his own critical troop-leading tasks, the troop commander must effectively delegate the numerous preparation tasks that are part of the troop-leading process. One technique is to use members of the troop headquarters to assist in completion of these activities. Additional preparations delegated by the commander may include, but are not limited to, the following tasks:

- Prepare or build rehearsal sites.
- Monitor subordinate unit rehearsals.
- Create visualization products such as sketches, strip maps, and overlays.
- Copy analog orders, graphics, and matrices.
- Create digital products based on other materials (including the SITEMP, orders, overlays, and reports).
- Record incoming information such as status reports, WARNOs, and FRAGOs.
- Continuously refine the SITEMP using the latest intelligence.
- Distribute the updated SITEMP to all troop elements.
- Enforce the troop timeline.
- Receive standard reports from troop elements.
- Pass required reports to higher.
- Track unit battle preparations and logistical and maintenance status.

Rehearsals

2-108. Rehearsals are practice sessions conducted to prepare units for an upcoming operation or event. They are essential in ensuring thorough preparation, coordination, and understanding of the commander's plan and intent. The value of rehearsals should never be underestimated.

2-109. **Types of Rehearsals.** The following discussion covers the four types of rehearsals that troops are most likely to conduct.

2-110. **Confirmation brief.** At the conclusion of the OPORD briefing, the commander answers any questions, and then conducts a confirmation brief using a terrain model, sketch, or map that provides accurate representations of the terrain, the threat, and friendly graphics. Subordinate leaders must demonstrate their understanding of the commander's intent, the troop's concept of the operation, and their specific tasks and relationship (purpose) to the troop's concept. The commander should avoid questioning subordinates specifically ***how*** they will execute their tasks because they have not yet formulated their own plans. Rather, he uses the confirmation brief to further clarify the scheme of maneuver for them and to give them a feel for how they will work in concert with one another to achieve the unit purpose.

2-111. **Backbrief.** As subordinate leaders conduct their troop-leading procedures and develop their plans, the commander conducts backbriefs to learn how his subordinates intend to accomplish their tasks. Backbriefs should be conducted early in the subordinate's troop-leading procedures, generally after they have completed their tentative plans, perhaps during the reconnaissance step. This provides subordinates an opportunity to incorporate additional commander's guidance into their actions to complete their plan. Backbriefs enable the commander to—

- Clarify his intent or provide additional guidance.
- Identify problems in the concept of the operation.
- Identify problems in a subordinate commander's concept.

2-112. **Battle drill or SOP rehearsal.** Battle drill or SOP rehearsals ensure that all participants understand a technique or specific set of procedures. They are used most extensively at platoon, squad, and section levels. The rehearsals are interactive; participants maneuver their actual vehicles or use vehicle models or simulations while verbalizing their elements' actions. The focus is on the ***how***, allowing subordinates to practice the required drill or SOP actions. Platoon rehearsals can be nested within the troop combined arms rehearsal, with the commander specifying in a WARNO the drills he wants rehearsed prior to the troop rehearsal. The platoon leader can rehearse additional drills, and in some cases an SOP may designate drills that are rehearsed for every type of operation, such as a crew evacuation drill or actions at a danger area.

2-113. **Combined arms rehearsal.** The troop combined arms rehearsal is normally conducted after the troop's subordinate leaders have issued their OPORDs. The rehearsal ensures that subordinate elements' plans are synchronized within the troop and all plans will achieve the troop commander's intent. As with battle drill rehearsals, the participants perform their required tasks under conditions that are as close as possible to those expected for the actual operation but within the limitations of the technique used. For example, in a rehearsal, platoon leaders should actually send spot reports (SPOTREP) when reporting threat contact, rather than simply saying, "I would send a spot report now." The rehearsals also enable the commander to—

- Reinforce training and increase proficiency in critical tasks.
- Integrate the actions of subordinate elements.

- Reveal weaknesses or problems in the plan, leading to further refinement of the plan or development of additional branch plans.
- Confirm coordination requirements between the troop and adjacent units.
- Improve each soldier's understanding of the concept of the operation, the direct fire plan, anticipated contingencies, and possible actions and reactions for various situations that may arise during the operation.

2-114. **Rehearsal Techniques.** Rehearsal techniques are limited only by the troop's resourcefulness. There are six techniques used: full dress, reduced force, terrain model, sketch map, map, and radio. As they are listed, each successive technique requires a decreasing amount of time and resources to prepare and conduct. Each technique has different security risks. Rehearsal techniques include the following:

- **Full dress rehearsal.** These rehearsals involve every soldier and system participating in the operation and ensure the most detailed understanding of the mission. If possible, the troop should conduct the rehearsal under the same conditions—weather, time of day, terrain, use of live ammunition—that it will encounter during the actual operation. Full dress rehearsals will attract the attention of the threat, and the troop must coordinate or develop measures to protect the rehearsal from threat observation. The rehearsal area must be secured, cleared, and maintained throughout the process.
- **Reduced-force rehearsal.** These rehearsals involve the troop's key leaders, but the terrain requirements are the same as those for a full dress rehearsal. The commander must decide the level of leader involvement and the equipment requirements. The selected leaders then execute the plan while traversing the actual or similar terrain. An example of a reduced-force rehearsal would be the target acquisition and execution of BCT fires during an operation. Additional considerations for this technique are:
  - A reduced-force rehearsal could be used to prepare for a full dress rehearsal.
  - A key subordinate unit, such as a COLT platoon, could be conducting a full dress rehearsal within the troop's reduced-force rehearsal.
  - The rehearsal area must be secured, cleared, and maintained throughout the process.
- **Terrain-model rehearsal.** This rehearsal employs a scaled terrain model to help troop leaders visualize the operation in accordance with the commander's intentions. The size of the model may vary from leaders moving icons or micro armor on a sand table to one that the participants walk or drive on. If possible, the model should be on a vantage point, or on the reverse slope, that overlooks the troop's AO. The model's orientation should coincide with the AO. The participants may execute the entire operation, or just selected phases, events, or tasks within the operation.

- **Sketch-map rehearsal.** This rehearsal follows the same procedures as the terrain model, but substitutes a sketch map for the model. The sketch must be scaled to allow all participants access or observation while subordinate unit icons are moved simultaneously. If possible, the rehearsal should be on a vantage point, or on the reverse slope, that overlooks the troop's AO. The map's orientation should coincide with the AO.
- **Map rehearsal.** This rehearsal follows the same procedures as the terrain model, but substitutes the map of the troop's AO for the model. It is most effective for confirmation or backbriefs involving subordinate leaders and/or portions of their elements. The leader uses the map and overlay to guide participants as they brief their role in the operation.
- **Radio rehearsal.** This rehearsal follows the same procedures as a map rehearsal and involves the troop's leaders interactively and verbally executing key events or tasks of the operation over established communications networks. The commander establishes the sequence of events/task to be rehearsed and the CP rehearses battle tracking. The rehearsal must include all communications equipment necessary to execute the rehearsed event or task.

2-115. **Rehearsal Guidelines.** The troop commander is responsible for most aspects of the troop's rehearsals. The commander will select the tasks to be rehearsed and will control execution of the rehearsal. He will usually designate someone to role-play the threat elements he expects to face during the operation.

2-116. **Conditions.** Rehearsal situations should be as close as possible to those expected during the actual operation. This includes the physical aspects of the rehearsal site as well as such factors as light and weather conditions.

2-117. **Actions before the OPORD is issued.** Initial WARNOs should provide subordinate leaders with sufficient detail to allow them to schedule and conduct rehearsals before the OPORD is issued. For example, leaders can begin rehearsing mission-specific tasks, drills, and SOPs for each element early in the troop-leading process. Rehearsals after the OPORD can then focus on tasks that cover integration of the entire team.

2-118. **Progression of rehearsal activities.** Rehearsals begin with soldier and leader confirmation and backbriefs to ensure understanding of individual and unit tasks. Individual elements and the troop as a whole then use sand tables or sketches to talk through the execution of the plan. This is followed by walk-through exercises and full-speed mounted rehearsals.

2-119. **Rehearsal priorities.** The troop commander establishes a priority of rehearsals based on the time available and the relative importance of the actions to be rehearsed. As with COA development, the priority should begin at the decisive point of the operation and move on to actions that are less critical to the plan.

2-120. **Refinement.** At all times, the troop commander must ensure that the troop has an accurate picture of the threat situation and that the plan

to defeat the threat is relevant to the threat's current disposition. This means that the troop plan must continue to evolve as the threat situation develops.

2-121. As discussed previously, the troop will receive a constant stream of additional information about the threat before the operation starts through a combination of different levels of ISR operations. The commander uses this information to continually adjust the plan as necessary. Changes to the plan and the threat situation must be disseminated down to the lowest level. Although these constant updates may cause some disruption of troop-leading procedures at the platoon level, the refinement process is critical to the success of the troop plan.

NOTE: Refinement of the plan does not stop when the troop crosses the LD. Once the operation is under way, the commander continues to adjust the plan based on the threat's actions and the terrain on which the troop is operating. The commander gains additional information through reports and the troop's own development of the situation. He uses FRAGOs to update the troop on refinements to the plan.

SECTION III – COMMUNICATIONS

2-122. Troop communications are an integrated system of doctrine, procedures, organizational structures, personnel, equipment, and facilities designed to—

- Collect, evaluate, and interpret the information needed to develop situational awareness (the COP) in support of a commander's mission.
- Support a commander's exercise of C2 across the range of military operations through regulation of forces and functions in accordance with commander's intent.

2-123. The communications system allows the commander to plan, execute, collect, control, exploit, disseminate, present, and protect information using a resilient voice and data communications network to enable effective C2 on the battlefield. Every reconnaissance vehicle in the troop is equipped to support all aspects of operations: maneuver, fires, logistics, force protection, information operations, and intelligence (see Figures 2-3 and 2-4).

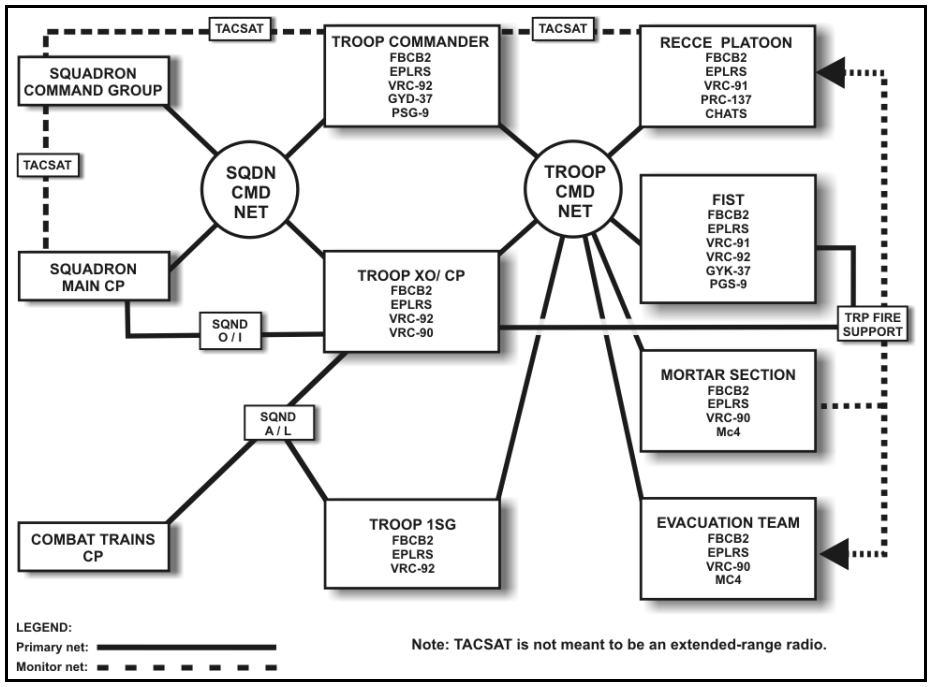


Figure 2-3. Recce Troop Communications Network

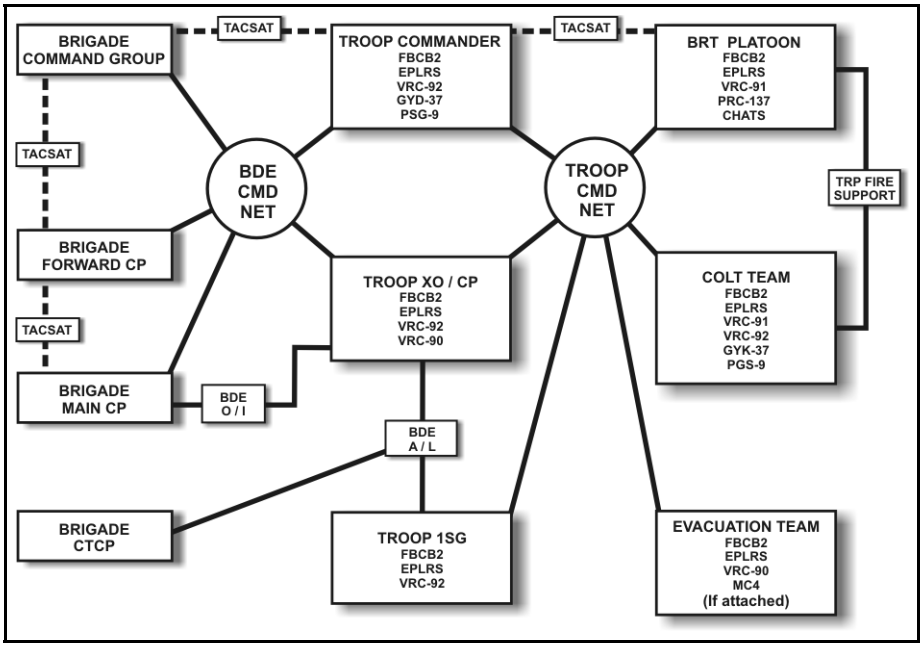


Figure 2-4. Brigade Reconnaissance Troop Communications Network

2-124. The troop operates and transmits or receives information on the following external nets:

- **Brigade/squadron intelligence net.** This net is used primarily to share threat and friendly information. All routine and recurring reports are transmitted on this net.

- **Brigade/squadron command net.** This net is used to pass C2 information from one commander to another.
- **Administrative and logistics (A/L) net.** This net is used for the exchange of logistical information and unit status reports, as required.
- **Troop command net.** This net is used to pass C2 information as well as critical reports within the troop.

NOTE: The brigade's SOP may designate a spare net as an ISR net specifically for the C2 of elements conducting ISR operations.

2-125. The troop commander and the CP normally monitor the brigade/squadron command net and operate on the brigade/squadron intelligence net and the troop command net. The 1SG normally operates on the troop command net and the troop and squadron A/L nets.

2-126. Figures 2-3 and 2-4 also depict how the troop command net links the troop commander with his subordinate units. The number of operators on the net will vary with mission and task organization and may include engineer reconnaissance, NBC reconnaissance elements, or remote multisensor teams. Platoon leaders and platoon sergeants operate on the troop command net and their own platoon nets. The FIST elements operate on three radio nets:

- The troop command net.
- The troop fire direction net.
- The brigade/squadron fire support element digital/voice net.

2-127. If assigned, the FIST also monitors at least one of the following nets:

- The brigade/squadron command net.
- The brigade/squadron intelligence net.
- The firing battery net (supporting artillery headquarters in the heavy and light division).

2-128. Designated elements of the troop will monitor the command and/or intelligence nets of adjacent units or other elements operating in their AO to transmit information, coordinate operations, or conduct reconnaissance handover directly. Those nets should be identified prior to executing an operation and the frequencies included in the troop order coordinating instructions. These units may include—

- Forward forces such as a divisional cavalry squadron.
- Adjacent reconnaissance troops.
- Follow on battalion or task force scouts.
- Battalions or task forces.
- Surveillance troop or MI Company and their subordinate elements.

SECTION IV – DIGITIZATION

ARMY BATTLE COMMAND SYSTEM COMPONENTS

2-129. The Army battle command system (ABCS) is made up of the Army tactical command and control system (ATCCS) subcomponents, the FBCB2 system, and the tactical internet (TI). The ATCCS, including the maneuver control system (MCS), all-source analysis system (ASAS), AFATDS, forward area air defense command, control, communications, and intelligence (FAADC3I) system, the combat service support control system (CSSCS), and the global command and control system-Army (GCCS-A) are the primary digital communication systems between battalion/squadron and above CPs. FBCB2 is the primary digital system for communication and transmission of situational awareness data between leaders at brigade and below.

ARMY BATTLE COMMAND SYSTEM COMMUNICATIONS LINKS

2-130. While each component of the ABCS is a powerful C2 tool individually, they reach their full potential when linked by a local area network (LAN), a wide area network (WAN), or the TI.

LOCAL AREA NETWORK

2-131. A LAN network is a data communications network that interconnects digital devices within a CP. A tactical LAN is configured to interconnect various main CP shelters. Two or more computers linked by software and connected by cable are considered a LAN. The unit S6 is normally responsible for the LAN and ensuring that it is connected to the WAN.

WIDE AREA NETWORK

2-132. A WAN connects several LANs and allows for the transmission of large amounts of data over extended distances. Digital CPs use the WAN to connect to higher, adjacent, and subordinate unit LANs using one of the following types of communications systems:

- Mobile subscriber equipment (MSE) network.
- Global broadcast service.
- Near-term data radio (NTDR).

2-133. The LAN connects to the WAN at a gateway. The gateway is located in a small extension node (SEN) or large extension node (LEN). The brigade S6 and supporting signal troop are responsible for connectivity to the SEN and WAN operations.

TACTICAL INTERNET

2-134. The TI consists of tactical radios (SINCGARS and EPLRS) linked by routers, which allow digital systems to interoperate in a dynamic battlefield environment. The purpose of the TI is to provide timely, reliable, and secure battlespace information. The TI provides seamless communications connectivity that is necessary to deliver situational awareness and C2 data to digital battlefield systems. FBCB2 communicates with ATCCS systems via the TI. Two distinct subnetworks comprise the TI: the lower TI and the upper TI.

Lower Tactical Internet

2-135. The lower TI provides for the digital communications for echelons at brigade and below. It is composed of three primary components—EPLRS, SINCGARS, and internet controller (INC) (see Figure 2-5). The function of each component is the following:

- EPLRS provides data-only communication (vehicle position information, network coordination, and data communication) capability.
- SINCGARS provides data and voice communications capability.
- INC is the internet controller that is built into the SINCGARS radio mount. It provides routing interface between EPLRS and SINCGARS. The INC controls information traffic routing. EPLRSs are "servers" in the TI. All systems are associated with a server in order to pass digital traffic. Systems not equipped with EPLRS pass data via the INC through SINCGARS to their EPLRS server. If the server is degraded, the SINCGARS automatically searches for a quality server and will jump servers if necessary. This is invisible to the operator.

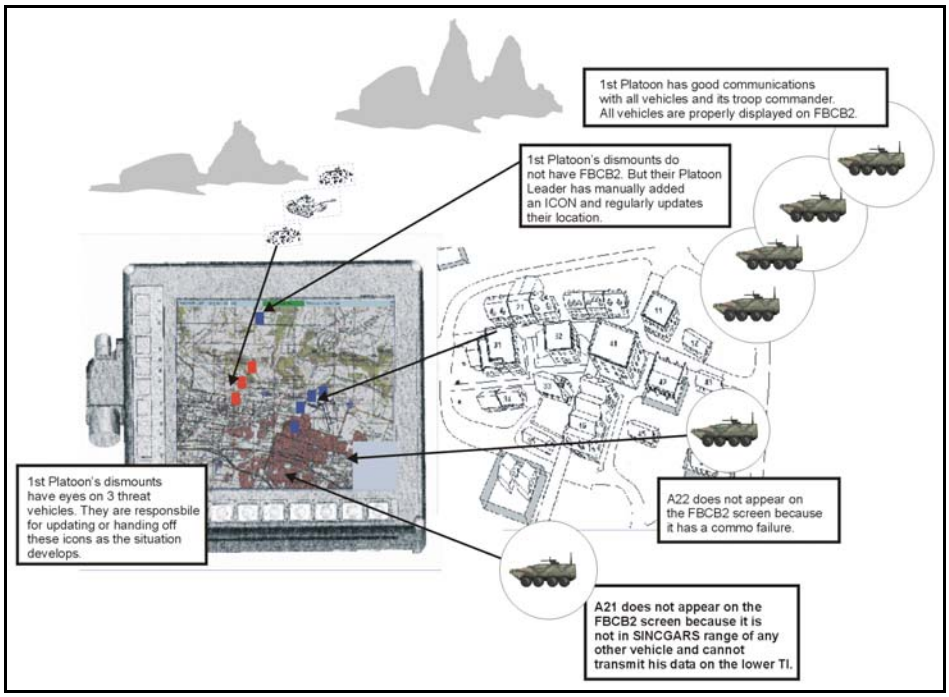

1st Platoon has good communications with all vehicles and its troop commander. All vehicles are properly displayed on FBCB2.
1st Platoon's dismounts do not have FBCB2. But their Platoon Leader has manually added an ICON and regularly updates their location.
1st Platoon's dismounts have eyes on 3 threat vehicles. They are responsbile for updating or handing off these icons as the situation develops.
A22 does not appear on the FBCB2 screen because it has a commo failure.
A21 does not appear on the FBCB2 screen because it is not in SINCGARS range of any other vehicle and cannot transmit his data on the lower TI.

Figure 2-5. Lower Tactical Internet

Upper Tactical Internet

2-136. The upper TI (or WIN-T [Warfighter Information Network-Terrestrial]) provides SA and C2 dissemination between battalion/squadron and above CPs.

FORCE XXI BATTLE COMMAND BRIGADE AND BELOW

2-137. FBCB2 is the foundation system for ABCS and the TI. Mounted on most of the combat vehicles in the BCT, each system is linked to a PLGR and a SINCGARS or EPLRS. Each FBCB2 generates and transmits its own position location. Collectively, the FBCB2 systems generate the Blue SA picture. Operators utilize FBCB2 to generate threat SPOTREPs, which create the majority of the red picture at the tactical level. The messaging, reporting, and orders/graphics capabilities of the system support battle command for each battlefield functional area.

2-138. FBCB2 receives data across the TI via the INC. The INC is a tactical router built into the SINCGARS. The EPLRS data radio and the SINCGARS data/voice radio transmit/receive digital information between vehicles. This communication architecture is discussed in greater detail in the TI paragraph of this section.

NOTE: The ATCCS discussed below has embedded battle command (EBC) software that allows interface with FBCB2.

FBCB2 MESSAGE INTERFACE

2-139. FBCB2 (hardware) is at the individual vehicle level. EBC is FBCB2 background software operating on ATCC systems. It enables command posts to receive and display SA and C2 information from the tactical level on any ATCC system. Figure 2-6 shows an example of the ATCCS message interfaces.

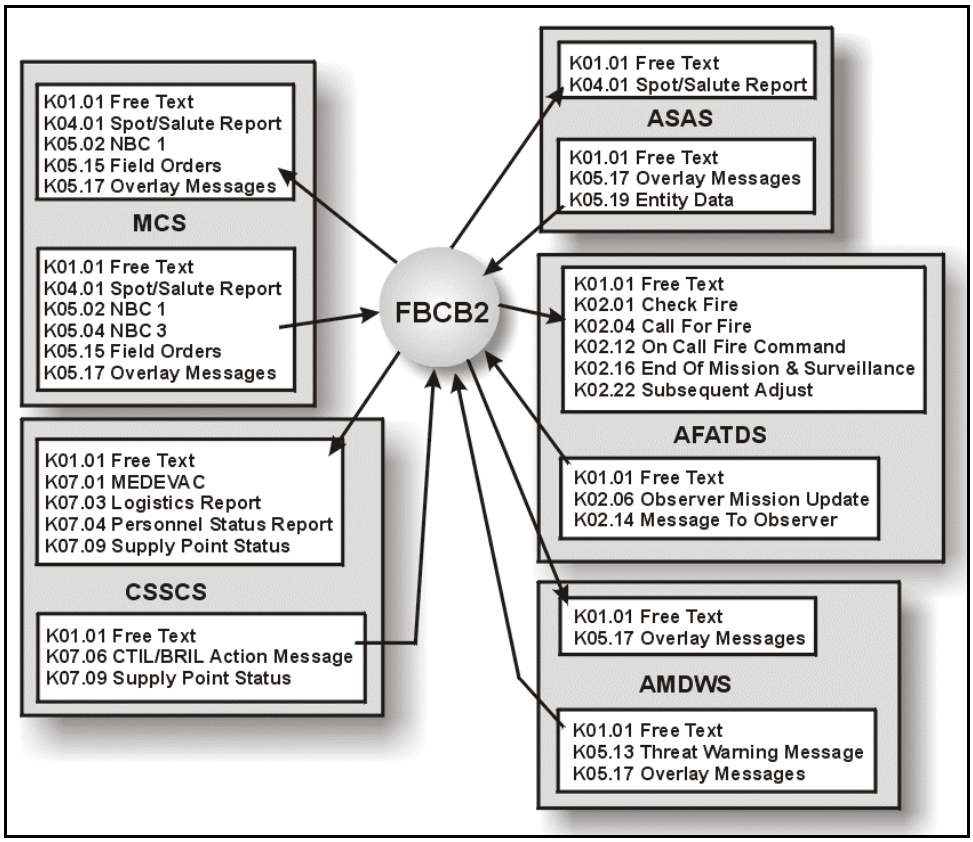


Figure 2-6. ATCCS Message Interfaces

VARIABLE MESSAGE FORMATS AND FREE TEXT MESSAGES

2-140. FBCB2 has extensive variable message formats (VMF) as well as the capability for creating free text (unformatted) messages. To the maximum extent possible, **operators should use the VMF messages in order to minimize the volume of traffic on the tactical internet** and to interface with other systems in the ABCS in the most effective manner. When a VMF message is transmitted, only the data in the filled-in fields is sent. When a free-text message is transmitted, all the text is transmitted, generally creating a greater transmission load.

2-141. Some VMF reports interface with other systems in the ABCS to add to database information or to expand communications. For example, a digital threat SPOTREP sends a text message to the addressees and creates an icon of the threat in the situational awareness picture that is transmitted across the brigade network. Additionally, the report automatically enters into the intelligence database of the ASAS, populating the intelligence database at brigade, the other subordinate units in the brigade combat team, and division.

MESSAGE DISTRIBUTION

2-142. The database in FBCB2 contains the tactical internet addresses of all FBCB2-equipped platforms and the CPs in the brigade, and some select platforms at division level. Messages, orders, and overlays can be sent to desired addressees by two methods—unicast and multicast.

Unicast Transmission

2-143. A unicast transmission is one sent to individual addressees on the address list. Generally, unless orders, overlays, and logistical status reports are short and carefully crafted, they will have to be transmitted by unicast. While this may seem arduous and time-consuming, it is considerably faster than manually copying overlays or reproducing orders, then having personnel drive to the CP to pick them up.

Multicast Groups

2-144. Multicast groups are set groupings of addressees that are established in the address database. The benefit of multicast groups is that an operator can transmit a file to a group of people in a single action rather than having to go through the process of sending it to each individual. The message is not sent to all addressees at once, but to each one sequentially.

2-145. An example of a multicast group is the squadron command group, which includes the brigade commander, XO, S3, and brigade TAC CP. There are a variety of multicast groups for each unit and battlefield functional area, such as fire support or intelligence. Operators can create or tailor multicast groups to fit their special requirements. For example, the troop commander can create two multicast groups. The first might be for key leaders and include the XO, 1SG, platoon leaders and platoon sergeants, and the troop CP. The second might be for all platforms in the troop. The troop 1SG could create a supply multicast group that would include the platoon sergeants, the supply sergeant, the XO, and the squadron S4. The squadron and troop SOPs should define the addressees in the most common multicast groups.

2-146. FBCB2 has transmission settings that can be set for the number of retries the system will automatically execute to get a message to a platform that does not receive it the first time. This should be a standard SOP setting across the troop. As a rule, the setting should be for a one-time transmission with no retries to reduce the volume of traffic on the tactical internet.

ORDERS

2-147. FBCB2 provides formats for the creation and transmission of orders. The formats largely mirror the doctrinal five-paragraph order format. Considerations in using these formats include the following:

- Each field has a limit on the number of characters that can be input.
- FBCB2 does not currently have a print capability. Order recipients will need time to take notes on the order when received.
- FBCB2 can save an order to the system hard drive, but does not currently have the capability to save a file to a disk.
- The larger the order, the longer it takes to transmit. Orders larger than 576 bytes must be transmitted by unicast addressing.

2-148. The commander's goal should be to provide a complete order in writing to his subordinates. As a minimum, he must provide critical coordinating information. Subordinates should have this information before the orders brief begins so they can study it beforehand and make notes during the briefing. The ability to rapidly create and transmit orders digitally is a tremendous capability, but it is still not as effective as a face-to-face order brief and rehearsal. FBCB2 does, however, provide an excellent WARNO and FRAGO capability. When an order has been digitally transmitted to subordinates, accompany it with an FM radio call to alert them to check FBCB2 for receipt and to acknowledge that they have read and understand the order.

GRAPHICS AND OVERLAYS

2-149. The ability to create and transmit digital graphics, coupled with automatic friendly force SA, is altering the traditional doctrinal application of graphics. Simplicity is a principal consideration—less is better since it reduces overlay transmission times and screen clutter (having too many objects on the screen making the display hard to read or illegible). A key point is maps are still required and still must have graphics posted on them. Soldiers will find that a map is easier and more appropriate to use when referencing a large terrain area, when moving, and when fighting.

Object Size

2-150. Digital graphic object size is important in creating overlays. The larger the overall size of an overlay, the longer it will take to transmit. Considerations in determining the size of graphical objects include—

- A single character (letter or number) is eight bits; 100 bits equals one byte.
- A single straight line, no matter how long, consists of two points, equaling 30 bytes of information. Adding another

point (by clicking the mouse or touching the screen) increases the size of the object by 7 bytes.

- A single point icon, such as an unlabelled target symbol, is 21 bytes. The label for an object can be up to 21 bytes. A target symbol with a five-character alphanumeric designator equals 23 bytes.
- Message headers are 17 to 18 bytes; date-time group (DTG) is 4 bytes.

2-151. A single object can have no more than 50 points. A circle or oval has a lot of points and is a large amount of information to transfer, no matter how big it appears on the screen. On the other hand, a square or rectangle is only four points, or about 80 bytes. Consequently, digital units draw objective and position areas using squares instead of the traditional goose egg graphics to reduce file sizes and the volume of digital traffic on the TI and to speed transmission times.

Color-Coding

2-152. Current graphics doctrine defines what colors to use in depicting certain activities or elements. For example, friendly graphics are always in blue or black. But with the variety of colors available in digital systems, greater clarity can be achieved by expanding beyond the current doctrinal definitions. In a digital system, greater clarity and ease of use can be achieved using multiple colors. For example, the BCT may portray each subordinate battalion's graphics in a different color and the graphics for the squadron or BRT in another. The troop commander may elect to use white for the first scout platoon and blue for the second. If attached, COLT graphics could be in gray. Templated threat graphics might be in purple while actual identified threat could be depicted in red. Whatever color scheme is used, it must be standardized across the BCT.

Filter Settings

2-153. FBCB2 has different filter settings for the depiction of red and blue elements in the situational awareness picture. The filter settings are essentially based on time and serve as an indicator of how long an icon has been in the same location. Operators set times at which an icon will go stale, get old, and then be purged. An icon will begin to fade as it goes stale, fade further at the old setting, and then be eliminated from the display at the purge time. For all elements to have a common picture, these filter settings must be the same on all platforms and be defined in troop SOPs.

2-154. An example setting for blue SA is for the system to update every 50 meters of platform movement, for the icon to go stale after 20 minutes of being stationary, become old after 6 hours, and then be purged at 18 hours. Obviously if the unit is going to be static for an extended period, the settings should be for longer times.

2-155. Red SA settings should be based on the type of operation the threat is executing. If they are attacking, the stale and purge settings should be fairly short. This helps reduce having a false picture of the threat and prompts personnel to update the threat SPOTREP frequently. Table 2-2 shows a sample set of standard settings.

Table 2-2. Standard Settings

Mission	Stale	Old	Purge
Counterreconnaissance	20 minutes	40 minutes	1 hour
Reconnaissance	1 hour	2 hours	4 hours
Threat Attack	10 minutes	20 minutes	1 hour
Threat Defense	1 hour	2 hours	4 hours

2-156. Settings that are too short will require constant regeneration of SPOTREPs. If the settings are too long, the picture will become obsolete and misleading unless the threat remains stationary. As the threat transitions from offensive to defensive operations (or vice versa), a net call should be made from squadron/brigade level to transition to the appropriate standard SOP settings. Again, if all elements are to have a common situational picture, everyone must apply standard SA filter settings. In stability operations and support operations, the times may be increased to maintain SA of factional activity over a longer period of time.

Creating Red Situational Awareness

2-157. The hardest and most critical aspect of creating the SA picture is creating the picture of the threat. It starts with an observer identifying a threat element, then creating and transmitting a digital SPOTREP. The SPOTREP must be as accurate as possible in order for the intelligence picture at troop and higher levels to be correct, and to achieve the appropriate analysis and decisions. When transmitted, the text of the report will be sent to all the platforms in the address group. It will also create a red icon that will be displayed on all platforms in the brigade network.

2-158. When the SPOTREP is transmitted, it should be addressed to a multicast group that includes the squadron S2. This not only keeps him informed but also automatically enters the report into the ASAS database where it becomes part of the higher-echelon intelligence picture.

2-159. As the threat moves or his strength changes, the observer must update the SPOTREP. A key point is that only the originator of the SPOTREP or the S2 can delete an icon from the entire network. To update the report, the observer deletes the original report, which will delete the icon across the network, and then he generates a new SPOTREP. Ideally, an observer maintains responsibility for keeping that report and its associated icon updated and accurate until the threat is eliminated or forced to move. In some situations, an observer will pass observation and responsibility to another observer, a following scout element for example. That handover should be made only after the new element verifies it has the threat under observation. When that occurs, the initial observer deletes his report and icon, and the new observer initiates a new SPOTREP, assuming responsibility for observation and reporting.

2-160. The S2 may delete icons from the network picture as he gets redundant reports or new information that allows him to refine the threat picture. He also can create a threat picture in ASAS, using all the

information sources available to him plus the FBCB2 reports. He can send this ASAS picture to all FBCB2-equipped platforms.

2-161. This ASAS report will add to—*not replace*—the existing red SA shown on FBCB2. This can create confusion and a false picture of the threat situation. To prevent this, settings on FBCB2 for threat SA allow an operator to select only the FBCB2 reported icons, only the ASAS-transmitted picture, or both. At troop level and below, the best technique is to use the FBCB2 SPOTREP setting, and occasionally switch on the ASAS picture to check for additional information, and then turn the ASAS picture off.

CHAT (CAVALRY SQUADRON RSTA)

2-162. CHAT (counterintelligence/human intelligence automated tool) is a portable or vehicle-mounted computer system used by the HUMINT collectors assigned throughout the squadron to report HUMINT operations and maintain an operational database.

SECURITY

2-163. The information architecture on the battlefield contributes significantly to the warfighting capabilities of units on the battlefield. The digitized battlefield brings a new threat: computer network attack (CNA). CNA includes operations the threat undertakes to disrupt, deny, degrade, or destroy information resident in computers and networks. To protect against CNA, security architecture is being developed that will involve security technologies, such as firewalls, intrusion detection systems, in-line network encryptors, and host security. The digital security requirements are defined in AR 380-19 and the program executive officer command, control, and communications systems (PEOC3S) security policy.

SECTION V – TECHNIQUES OF TACTICAL CONTROL

2-164. This section addresses techniques and procedures for C2 of digital (FBCB2) and analog units. As much as possible, the section focuses on techniques that are not software-version specific, and is not limited to only digital systems.

PLANNING PROCESS

2-165. FBCB2 provides significant enhancements to the troop planning process. With digitization, minimal time is lost in mission planning and preparation. The squadron commander and his staff can digitally issue a warning order and draft operations overlay. With this information in hand, the troop commander and his subordinate leaders may begin their troop-leading procedures, rehearsals, and reconnaissance operations, as required, or they may initiate movement from their assembly areas to forward locations and develop the initial screen line. Upon receipt of the OPORD, they can reorient their reconnaissance or surveillance as required.

REPORTING PROCESS

2-166. Since reconnaissance and surveillance are stealthy operations, digital communication will often be the primary method used for C2 and reporting. However, sending digital reports when moving, when in contact, and often at night is generally not possible.

2-167. Reporting procedures at the troop level must be well thought out and addressed in the unit SOP. The troop commander must determine when and what reports will be transmitted via voice or digital means and under what conditions these reports will be rendered. For example, if reports from the scouts must be transmitted via FM voice due to the tactical situation, the troop commander must determine who at the troop CP is responsible for the transcription and translation of this information into FBCB2 format and further transmission to the squadron or BCT tactical operations center (TOC).

2-168. The troop commander, XO, S6, and S2 must determine the reporting process and procedures for troops using digital systems. Once determined, the process and procedures must be integrated into the overall troop SOP and orders.

FM VERSUS DIGITAL COMMUNICATIONS

2-169. The decision whether to use FM or FBCB2 communications is based on the situation and SOP. Digital communications should not be viewed as a replacement for FM; both are viable C2 tools. FBCB2 provides many benefits; however, in some circumstances, it is not the right tool to use to communicate. An FM alert should accompany some digital message traffic to prompt the recipient(s) to check their message cues and act on the message.

2-170. The troop and above SOPs should define what traffic will be sent digitally and what traffic will be transmitted on FM, and the conditions for each. Orders should establish triggers for switching from digital to FM communications as contact with the threat commences.

WHEN TO USE DIGITAL MESSAGES

2-171. At troop and platoon levels, digital message communications should be used for—

- Transmitting graphics, orders, and when the situation permits.
- Routine reporting, such as logistical status or routine requests for logistical support.
- Threat SPOTREPs. This is critical since the SPOTREP is the means by which a threat icon is created and displayed across the brigade net. The observer of the threat may not always be able to create the digital SPOTREP. In that case, he should report by FM and some other platform in the platoon, or the troop CP should create the digital report.
- Planned call-for-fire missions. The digital call-for-fire should be accompanied by an FM alert to the fire support element at the TOC or the supporting artillery to whom the message was sent. This is discussed in greater detail in the fire support section in Chapter 6.

- NBC-1 reports. NBC-1 reports should be sent digitally to create the contaminated area icon across the network. An FM report on troop and brigade command nets should also be transmitted.

WHEN TO USE FM RADIO

2-172. FM radio remains the primary communication means during contact. It is quick for both the transmitter and receiver, multiple stations can eavesdrop on the net and receive the information, and it is a medium that can convey emotion—a critical aspect in assessing and understanding a battlefield situation. At night, light discipline will require most elements of the troop to use FM radio. As a result, the troop CP must convert FM traffic into the appropriate digital reports. FM radio is normally the primary means of communication in the following situations:

- Contact reports should be initially sent on FM.
- Calls for fire on targets of opportunity should be sent by FM in order to get timely fire support. This is particularly true for moving targets. There are situations for planned targets or when the observer is out of FM range but has digital connectivity that calls for fire and subsequent adjustments will be sent digitally.
- Urgent MEDEVAC requests should be initially transmitted on FM. A follow-up digital report should be sent to provide an accurate reference for the recipients.

TACTICAL CONSIDERATIONS

Boundaries

2-173. Current doctrine establishes that boundaries are used to define a unit's AOs and to act as restrictive fire control measures to prevent fratricide. With units conducting noncontiguous operations in expanded battlespace and with the capabilities of automated SA and digital systems, the manner in which boundaries are used is changing. Digital units may use boundaries to convey the general operational concept and to generally define a unit's AO. For digital units, boundaries may not always be drawn relative to identifiable terrain, often because it is easier to create and transmit the overlays that way, and because SA allows for easier tracking and visibility of friendly units. This works relatively well at echelons above brigade, but at brigade and below, units can experience problems when they try to clear and coordinate fires and positions. To the maximum extent possible, keep boundaries along identifiable terrain for the purpose of clearing fires and preventing fratricide. Remember that there will be elements on the battlefield that do not have FBCB2 or whose system is inoperative, forcing them to operate with traditional analog graphics and FM radios only.

Phase Lines

2-174. Like boundaries, the use of phase lines (PL) is altered by digital system capabilities. PLs are primarily used for coordinating the movement of forces and for reporting locations. With automated SA, the need for PLs is reduced. Digital units use fewer PLs, which eases

creation/transmission of overlays and reduces screen clutter. Again, consideration must be given to C2 of units that do not have FBCB2. If the BCT or squadron includes PLs in its graphics, the troop should include those in its overlays to ensure they are known and can be referenced if required during the course of operations. The troop commander should consider using additional PLs only if it will assist in controlling the unit or if he has subordinate elements without FBCB2.

Terrain Index Reference System/Grid Index Reference System

2-175. The terrain index reference system (TIRS) is a numbered reference point drawn relative to identifiable terrain. Graphically, it is usually a cross with a number. Some units may use TIRS in lieu of most other graphics. This works well in digital units, since TIRS overlays are easily created and transmitted, and screen clutter is minimized. FRAGOs can be given quickly and easily with great clarity using TIRS. Additionally, TIRS can function as a fire support overlay if it is created with that in mind, again reducing screen clutter and the number of overlays that must be created and transmitted. The system is somewhat limited in utility when working over very large areas or in complex and urban terrain.

2-176. The grid index reference system (GIRS) is shown by a tick mark located on a grid line intersection. Each point is given a designator of one letter and two numbers, such as X56, placed in the upper right quadrant of the tick mark. GIRS point designation is SOP, and units determine which letters they will use. They may designate specific letters for specific unit sectors or AOs.

2-177. The higher headquarters normally issues the TIRS/GIRS to use for the operation as early as possible, perhaps with the WARNO. The TIRS/GIRS list should be issued to elements as an annex to a written OPORD.

2-178. The unit should designate four to six TIRS/GIRS points in each 10-kilometer square. The TIRS/GIRS is normally sufficient for the troop to operate; however, if the troop designates additional TIRS/GIRS, it should always ensure only brigade/squadron TIRS/GIRS are referenced in its communications with higher headquarters.

2-179. TIRS/GIRS are used routinely to control combat operations. Use them—

- To identify BPs and to pass out control measures (such as LDs, PLs, and boundaries) quickly.
- To report friendly unit locations.

2-180. Passing control measures (such as BPs, sector boundaries, and PLs) are quick and accurate using TIRS.

Fratricide

2-181. FBCB2 significantly contributes to fratricide reduction by allowing all platforms to have visibility of FBCB2-equipped forces in their network. Vehicle commanders can check their displays quickly to see if friendly forces are operating in an area as they prepare to execute direct or indirect fires. There are, however, some limitations to the system that operators must take into consideration.

2-182. First, not all systems will be equipped with FBCB2 or have operational systems. Also, elements operating outside the squadron's communication architecture will not be visible on FBCB2. When leaders know there are elements without FBCB2 or with inoperable FBCB2 in the area, they should alert their soldiers to that situation. For example, the troop might be executing a rearward passage of lines when some of the unit's FBCB2 or associated radios become inoperative. In this situation, troop leaders should alert the unit in the area that they are passing through and that some platforms are not able to transmit SA data. They should identify where they are and what route they are returning on. This information should then be distributed to the appropriate elements in the unit being passed through.

2-183. Second, there is no dismounted system for FBCB2. This is critical for the troop when its dismounted observers are out, particularly as units begin calling for artillery fire. Fire support elements may check digital displays and see no blue icons in the target area, and be unaware that dismounted soldiers are operating in the area. FBCB2's SA display may be used for denying fires, but not for clearing fires. FBCB2 can speed the clearance of fires by quickly identifying if there are FBCB2-equipped elements in the target area. If a blue icon is in a target area, obviously artillery should not be fired there. The absence of a blue icon should not be the basis for assuming the area is free of friendly forces. Dismounted elements, elements without operational FBCB2, or elements that are not part of the squadron network could be present.

2-184. Third, depending on the blue SA filter setting, an operator may not have all blue units displayed. For example, if the filter setting is for display of only armor and infantry elements, the operator will not have visibility on all other blue assets such as artillery, air defense, and CSS vehicles. The same is true for the echelon filter setting. If only company and higher echelons are selected, the operator will not have visibility on the majority of the systems on the battlefield.

2-185. Fourth, the nature of tactics and capabilities is constantly evolving, with an increase in maneuvering forces and the use of rapidly emplaced obstacles. These changes can increase the chances of obstacle fratricide. FBCB2 can help reduce these chances if CPs keep obstacle overlays current and rapidly disseminate changes, and if operators keep current, critical overlays posted on their systems. Transmission of updated overlays should be accompanied by net-wide FM alerts to ensure system operators know new obstacle information has been disseminated and they are to display the new overlay(s).

2-186. Finally, the increase in maneuvering forces, the increased forward presence and maneuvering of artillery units, and the decrease in control graphics being employed can lead to fratricide incidents. To avoid such incidents, operators must utilize their FBCB2 to track friendly elements and conduct the essential FM cross-talk to clear fires and maintain their FBCB2 SA.

Chapter 3

Reconnaissance Operations

For the recce troop and the BRT, reconnaissance operations obtain information by visual observation (surveillance), tactical questioning, or other detection methods related to—

- The activities and resources of a threat.
- The meteorology, hydrographic, or geographic characteristics of a particular area.
- The infrastructure and social aspects of an area.

CONTENTS

Fundamentals 3-2
Fundamentals of Reconnaissance 3-2
Fundamentals of Reconnaissance Operational Environment 3-6
Fundamentals of Reconnaissance Focus 3-7
Reconnaissance Planning 3-11
Planning Considerations 3-11
Additional Reconnaissance Planning Considerations 3-13
Actions on Contact 3-15
Forms of Contact 3-16
Steps for Actions on Contact 3-17
Reconnaissance Handover 3-21
Considerations of Reconnaissance Handover 3-21
Examples of Reconnaissance Handover 3-23
Tactical Employment Considerations and Methods 3-26
Reconnaissance Methods 3-26
Infiltration 3-28
Exfiltration 3-33
Tactical Movement 3-35
Zone Reconnaissance 3-38
Critical Tasks 3-38
Example of Zone Reconnaissance 3-39
Area Reconnaissance 3-43
Critical Tasks 3-44
Example of Area Reconnaissance 3-44
Route Reconnaissance 3-49
Critical Tasks 3-50
Example of Route Reconnaissance 3-50

Reconnaissance is a *focused* collection effort performed prior to, in advance of, and during military operations to provide the commander with information he can use to confirm or modify his plan or concept of operations and to make decisions. *Reconnaissance focus* is clearly tied to CCIR, targeting, and relevant information requirements. The reconnaissance troop is the squadron/brigade commander's principal reconnaissance organization. Rarely will the troop fight for information. The troop primarily conducts reconnaissance, using surveillance, technical means, and human interaction to gain information. The troop performs area, zone, and route reconnaissance in addition to other responsibilities such as target acquisition and battle damage assessment.

The purpose of this chapter is to—

- Describe reconnaissance fundamentals and actions on contact.
- Describe the characteristics of reconnaissance planning, to include surveillance considerations.
- Describe the troop's three reconnaissance missions.
- Describe reconnaissance handover.

The reconnaissance troop is the higher headquarters commanders most valuable and effective reconnaissance asset. The troop commander has an increased number of ISR assets supporting his reconnaissance operations. The troop and its higher headquarters employ the reconnaissance fundamentals and incorporate the concepts of cueing, mixing, integration, and redundancy to capitalize on the strengths of one asset while mitigating the weaknesses of another. Satellite tracking systems, UAVs, intelligence sensors, and reconnaissance troops all contribute to the integrated and synchronized ISR effort. However, the best reconnaissance asset remains individual scouts. They provide detailed reconnaissance and are not as vulnerable to threat deception techniques. Scouts can assess changes in the environment, allowing them to adapt and execute within the commander's intent.

The troop's ability to assess the situation in its AO, and its link to the analysis assets at its higher headquarters, helps the troop anticipate events within the BCT's area of operations.

SECTION I – FUNDAMENTALS

FUNDAMENTALS OF RECONNAISSANCE

3-1. Successful reconnaissance operations are planned and performed with the following seven fundamentals in mind:

- Orient on the reconnaissance objective.
- Ensure continuous reconnaissance.
- Maximize reconnaissance assets.
- Gain and maintain contact.
- Develop the situation.
- Report all information rapidly and accurately.
- Retain freedom of maneuver.

ORIENT ON THE RECONNAISSANCE OBJECTIVE

3-2. Due to the BCT's expanded battlespace, the troop's reconnaissance efforts must be focused to avoid becoming overextended. The *reconnaissance objective* focuses the troop's efforts on a critical area

or priority intelligence requirements (PIR). During the IPB process, the BCT commander and battle staff identify the intelligence requirements to identify or determine information concerning the threat, society, infrastructure, or terrain. The commander develops his reconnaissance guidance that provides the focus, tempo, and engagement criteria for reconnaissance and surveillance (R&S) operations. Based on METT-TC, the reconnaissance focus may be oriented on threat forces, terrain, infrastructure, or society. The commander then identifies his reconnaissance objective based on the related concepts of reconnaissance pull and push, his reconnaissance focus, and his PIR.

3-3. **Reconnaissance pull** is used when the threat situation is not well known and/or is rapidly changing. This is normally during higher's planning and preparation phase for the decisive operations. ISR operations confirm threat courses of action and identify routes that are suitable for maneuver for either side, where the threat is strong or weak, where gaps exist, or when multidimensional aspects exist, such as the needs of society that will influence operations. It may be initiated at any echelon and is the basis of all ISR operations. Reconnaissance pull answers initial PIR to enable selection of a scheme of maneuver or course of action development, thus pulling the BCT to the path of least resistance, and facilitates initiative and agility in the execution of the decisive operation.

3-4. **Reconnaissance push** is used once the commander is committed to a scheme of maneuver or course of action. ISR operations refine the COP to enable the BCT to finalize the plan and support shaping and decisive operations.

ENSURE CONTINUOUS RECONNAISSANCE

3-5. The BCT conducts ISR operations before, during, and after all operations. The troop is integral in the BCT ISR operations, but is limited in its ability to conduct sustained and continuous reconnaissance. The troop will continually be tied to the BCT's ISR operations through FBCB2, but may not be actively supporting that ISR operation based on logistical, tactical, or command-related decisions.

3-6. Before a decisive or shaping operation, ISR operations provide reconnaissance pull by answering information requirements identified during IPB, and facilitate selection of a scheme of maneuver or course of action. During the execution of the decisive operation, ISR operations provide reconnaissance push by collecting updated information on threat compositions, dispositions, and intentions as the battle progresses. This allows the BCT commander to execute decision points tied to his CCIR and make other decisions based on the actual events within his AO. During transition operations following the decisive operation, ISR operations maintain contact with the threat to allow the BCT to locally exploit success or initiate planning for a subsequent operation.

3-7. The troop commander must consider the troop's ability to conduct sustained ISR operations through the width and depth of the BCT AO and span the duration of the BCT's operation. The commander may rotate platoons to maintain continuous coverage by having a follow-on platoon assume the reconnaissance mission of a lead platoon at a later time.

MAXIMIZE RECONNAISSANCE ASSETS

3-8. Maximizing reconnaissance is applying the right reconnaissance asset to the reconnaissance objective, providing redundancy when necessary, and maintaining contact throughout the depth and width of an AO.

3-9. The BCT integrates a wide range of ISR assets to maintain its COP, to include joint surveillance target attack radar surveillance (JSTARS)/U2 (imagery), signal intelligence, UAVs, ground sensors, and ground scouts. All systems are complementary and assist the reconnaissance troop in gaining contact under the most favorable conditions. UAVs extend the BCT's "eyes" throughout the depth of the AO, while ground sensors increase the range and duration of ISR operations. The troop is most capable of reconnoitering complex terrain; and they provide the critical human factors of adaptation, action/reaction, and initiative when developing the situation or interacting with the local populace. The integration of systems and personnel and their synchronized efforts compensate for individual weaknesses. In most cases, the entire troop will be required to operate along and through the depth of a linear battlespace; however, in a noncontiguous environment, the troop may have to orient in several directions.

3-10. The troop commander—based on his commander's reconnaissance guidance, intent, information requirements, and specified tasks and time available—determines the method of employing his assets. Based on METT-TC, he can phase or echelon his assets using cueing and higher surveillance assets to pull his reconnaissance forces into the area or zone, or he may decide that the environment is permissive enough or time is too short to allow echelonment of reconnaissance.

GAIN AND MAINTAIN CONTACT

3-11. Contact is critical to collecting information. Contact should be gained through sensors to provide scouts maximum standoff range and limit their exposure to threat acquisition systems. The BCT's primary concern is handing over the responsibility of maintaining contact to or between follow-on ground forces. These procedures must be clearly articulated in the BCT SOP or ISR order. The troop should gain contact using the scouts' long-range acquisition capability, or through hand-over from higher ISR assets. Once contact is established, surveillance of the threat force is not broken *unless* reconnaissance handover occurs, higher headquarters orders such an action, or the break is IAW higher's OPORD and commander's intent. The BCT, squadron, and troop use the following concepts to plan gaining and maintaining contact.

3-12. **Cueing** involves the use of one or more sensor systems to provide data that directs collection by other systems. For example, a PROPHET or GSR reveals activities that trigger direct collection by a more accurate system such as a UAV. The UAV imagery assists the troop in gaining contact under the most favorable conditions.

3-13. **Mix** involves complementary coverage by a combination of assets from multiple disciplines. Sensor mix increases the probability of collection, reduces the risk of successful threat deception, facilitates cueing, and provides more complete reporting. For example, UAV thermal imagery indicates several vehicle-like signatures in an NAI. A

scout team observing the same location observes that half the signatures are decoys and the remaining are threat armored vehicles.

3-14. **Redundancy** involves the application of several identical assets to cover the same NAI or target. Redundant tasking enables mission accomplishment when the probability for success by one asset is low. For example, the troop may infiltrate several scout teams along different routes to separate OPs overlooking the same NAI, or two COLTs may observe the same target group to acquire a high pay-off target (HPT).

3-15. **Integration** involves managing resources during ISR operations to avoid under-tasking collection systems. At times, collection capabilities may exceed current taskings. Units should constantly reevaluate each collection asset for unused capabilities and assign or redirect unused assets/capacities towards the most important unfulfilled requirements. For example, the troop commander assigns a scout platoon a series of NAIs to observe after it has been relieved from its current surveillance by a battalion scout platoon.

DEVELOP THE SITUATION

3-16. During ISR operations, it is important to gain situational understanding as soon as possible to provide the BCT commander the information and intelligence required to effectively maneuver the BCT. How this is accomplished depends on METT-TC. The BCT develops the situation by—

- Gaining contact through sensors and other ISR assets.
- Developing the situation out of contact.
- Maneuvering the force out of contact.
- Making contact on its own terms.
- Reevaluating and continuing to develop the situation as necessary.

3-17. The troop commander quickly gathers as much information as possible, either visually, or more likely, through reports from the platoon(s) in contact. Troops must be prepared to alter their plans and react to changes in the battlefield environment in support of the higher commander's intent. They may be required to adjust execution as the COP becomes more refined and IR and PIR are answered. For example, the scouts may need time to maneuver or relocate to better observe an NAI or to determine the exact size, composition, disposition, and activity of a threat force. Of greater importance is the rapid transmission of information to the troop, squadron, or BCT CP. Creating the COP through digital or FM SPOTREPs is critical to providing a common, accurate picture for focusing combat power against the threat.

REPORT ALL INFORMATION RAPIDLY AND ACCURATELY

3-18. BCT commander bases his planning and tactical decisions on the battlefield information obtained through the troop's reconnaissance efforts and BCT ISR operations. Intelligence loses its relevance as it ages. The troop must accurately report what it observes in a timely manner. Digitization promotes the accuracy of the intelligence information gathered as well as the timeliness with which it can be sent. Using FBCB2 and FM, the troop can transmit this vital combat information in real time. If the observer is unable to use an FBCB2 formatted report or

free-text message, such as at night or during contact, he uses FM to report to the troop commander or CP, who ensures that the report is forwarded using FBCB2.

RETAIN FREEDOM OF MANEUVER

3-19. The ability to maneuver is essential to reconnaissance. The troop primarily conducts reconnaissance dismounted or from lightly armored vehicles and are not capable of surviving protracted engagements with an threat force. The troop must not become decisively engaged; otherwise their survivability and ability to maneuver to execute their reconnaissance missions are at risk. Mixing and cueing ISR assets minimize chance contact. With the precision movement capability offered by FBCB2 and GPS, the recce troop can maximize the use of cover and concealed routes based on their pre-mission analysis of the terrain and threat location/disposition updates.

FUNDAMENTALS OF RECONNAISSANCE OPERATIONAL ENVIRONMENT

3-20. The troop conducts reconnaissance against threat forces, which assists the BCT commander's SU of the operational environment (OE). Rather than just a military focus on the threat, its capabilities, and the terrain, the troop must be prepared to account for the threat's multiple dimensions—political, cultural, economic, and demographic. The troop is a component of a *multilayered* approach to reconnaissance by fusing ISR assets, creating a synergistic network in gaining information within this complex environment. This *multidimensional approach to reconnaissance* means that the BCT must develop an understanding of not just what is happening, but why. In the OE, identifying threat centers of gravity, decisive points, and the means to influence the threat's will and behavior is one of the most important contributions the troop can make to the BCT's success. In order for the troop to successfully contribute, the commander, and subordinate leaders must understand the effect of the OE on reconnaissance operations.

3-21. The Army will not always face conventional forces in open areas. The information age has brought upon the Army the specter of *adaptive warfare*—a strategy in which a weaker opponent successfully engages a stronger opponent by using a variety of offsets for gaining advantage in hopes of achieving its objectives and goals. The *adaptive threats* include regional military forces, paramilitary forces, guerrillas and insurgents, terrorists, criminal groups, and certain civilian groups and individuals. Threat *adaptive* approaches involve information operations, WMD, hugging complex (mainly urban) terrain, civilian involvement, and evasive attacks against US forces. The troop must be ready to concentrate on both the traditional approach to reconnaissance of gathering information on threat forces and terrain and the *adaptive* aspects of an OE that impact military operations.

3-22. In the broader mission of providing information for SU of the OE, the higher headquarters must direct ISR operations on a myriad of dimensions—demographics, political, social, cultural, economic, infrastructures, open terrain, and complex terrain—as well as military factors. This *multidimensional reconnaissance* approach expands on the traditional focus of reconnaissance by concentrating on additional asymmetric threats, urban environment, society, infrastructure, and

other aspects that can influence military operations. ***Multidimensional reconnaissance is not a mission; it is an expansion of the focus of reconnaissance as well as the fusion of ISR assets that will direct information collection for the purpose of fulfilling BCT IR.*** There are a myriad of ISR assets that may be working in conjunction with the troop in this multidimensional approach to reconnaissance.

3-23. Additionally, the urban environment confronts commanders with a combination of difficulties rarely found in other environments. The distinct characteristics of the urban environment are primarily a function of the following factors:

- The increasing size and global prevalence of urban areas.
- The combinations of manmade features and supporting infrastructure superimposed on the existing natural terrain.
- The density of civilians in close proximity to combat forces.

3-24. Of these, the third factor and the human dimension it represents is potentially the most important and perplexing for commanders to understand and evaluate. The urban environment consists of urban terrain and urban society. An urban environment is not only defined by its structures or systems but by the people who compose it. Although complex, understanding the urban terrain is relatively straightforward in comparison to comprehending the multifaceted nature of urban society. Military operations often require Army forces to operate in close proximity to a high density of civilians, and their presence, attitudes, actions, and needs affect the conduct of operations. As urban areas increase in size, they become less and less homogenous; therefore, commanders must understand and account for the characteristics of a diverse population whose beliefs may vary based on many factors. The behavior of civilian populations within an urban area is dynamic and poses a special challenge to commanders conducting military operations.

FUNDAMENTALS OF RECONNAISSANCE FOCUS

3-25. Based on the OE, reconnaissance is focused on more than just the threat and terrain. The focus depends on what the higher headquarters needs to concentrate its information gathering. It allows the commander to determine his reconnaissance objective and select which critical tasks must be accomplished with what asset(s). Focus enables more detailed, comprehensive ISR operations and enhances the BCT's ability to fully understand its environment. Focusing reconnaissance within the multiple dimensions of ISR operations is paramount to understanding the OE. Reconnaissance focus must be linked to answering the higher headquarters CCIR, supporting targeting (lethal and nonlethal), and filling additional voids in relevant information. The focus of reconnaissance is characterized in these broad terms: **threat, society, infrastructure, and terrain**.

THREAT

3-26. The BCT no longer faces a single, monolithic, or well-defined threat. Reconnaissance units must be able to conduct operations across the range of military operations (i.e., MTW, SSCs, stability operations, and support operations) against threats ranging in size from major regional powers to asymmetric threats. Because of the diversity of the threat, IPB becomes even more important at the brigade, squadron, and troop levels. Adversaries may use a variety of doctrine, tactics, and equipment. The following are examples of threat dimensions of reconnaissance focus on an AO:

- Conventional threat forces.
- Paramilitary forces.
- Guerrillas, insurgents, or partisans.
- Terrorists or criminal organizations.
- Command and control elements.
- Lines and channels of belligerent authority, or sources of influence.

SOCIETY (SOCIAL/HUMAN DEMOGRAPHICS)

3-27. The focus of reconnaissance may be the society of a given area. Gaining an awareness of how the society impacts military operations and how military operations impact the local society may be critical to the commander in order for him and his staff to make decisions. To gain and/or retain the support of the population, commanders must first understand the complex nature and character of the society. Second, they must understand and accept that every military action (or inaction) may influence, positively or negatively, the relationship between the urban population and Army forces, and by extension, mission success. Without the support of the society or understanding its needs, the society may become a threat to military operations. With this awareness, commanders can plan operations, implement programs, and/or take immediate action to maintain support of a friendly populace, or neutralize or gain the support of hostile or neutral factions. Understanding how operations affect the society (and vice versa) normally begins with gaining information on the size, location, and composition of the society.

3-28. The BCT must be aware of the demographics in its AO. Conventional and unconventional threat forces are still a part of understanding the civilian demographics; understanding how threat operations affect the society (and vice versa) will have an impact on military operations. The higher headquarters leadership must be familiar with the factional leaders, such as mayors, police chiefs, and local military commanders. These relationships are critical across the full spectrum of operations. The BCT must understand the different cultural and economic backgrounds of the people it encounters and the needs of the local populace. Refugee situations are a part of the demographic makeup of an environment. Understanding the full dimension of demographic framework of a society is the basis of the characteristics of an environment and determines much of the reconnaissance objectives/focus.

3-29. Elements of a society may itself be a threat to the BCT. A mob demonstrating against US military presence could impact military operations and consequently be a specific focus for reconnaissance. Refugees clogging routes the BCT requires for operations may pose a threat. A focus may then be to identify these groups (and the leaders of these groups) to allow the BCT to use lethal or nonlethal effects to solve the problem. The following are examples of social/human dimensions of reconnaissance focus on an AO:

- Population demographics: Race, sex, age, religion, language, national origin, tribe, clan, class, party affiliation, education, or any significant social grouping.
- Government.
- Factional leaders.
  - Mayors.
  - Local police chief.
  - Local political leaders.
  - Local military commanders.
  - Local religious leaders.
- Nongovernmental organizations.
- Economy.
- Media.
  - Organizations.
  - Reporters.
  - Publications.
  - Broadcasts.

INFRASTRUCTURE

3-30. The infrastructure consists of those systems that support the inhabitants and their economy and government. Destroying, controlling, or protecting vital parts of the infrastructure can isolate the threat from potential sources of support. Because these systems are inextricably linked, destroying or disrupting any portion of the urban infrastructure can have a cascading effect on the other elements of the infrastructure.

3-31. To successfully operate in an area, the BCT must understand the local infrastructure, to include utilities, transportation, and food availability. It includes the financial infrastructure, to include the monetary base of the different communities, the income demographics, and the black-market trade. The BCT must also understand the local community, political, and governmental structure that identifies who can support BCT CSS requirements. This includes religious, military, and paramilitary, such as local security and police forces that work independently from one another. The leadership must develop a general understanding of these organizations—how they fit into the community at large and how they relate to one another. A reconnaissance mission focused on infrastructure might look at these dimensions:

- **Communications.** Wireless, telegraphs, radios, television, computers, newspapers, magazines, etc.
- **Transportation and distribution.** Highways and railways (to include bridges, tunnels, ferries, and fords); cableways and tramways; ports, harbors, and inland waterways; airports,

seaplane stations, and heliports; mass transit; and the trucking companies and delivery services that facilitate the movement of supplies, equipment, and people.

- **Energy.** Systems that provide the power to run the urban area, including the industries that produce, store, and distribute electricity, coal, oil, and natural gas. This area also encompasses alternate energy sources such as nuclear, solar, hydroelectric, and geothermal.
- **Commerce.** Includes business and financial centers (stores, shops, restaurants, marketplaces, banks, trading centers, and business offices) and outlying industrial/agricultural features (strip malls, farms, food storage centers, and mills) as well as environmentally sensitive areas (mineral extraction areas and chemical/biological facilities).
- **Human services.** Includes hospitals, water supply systems, waste and hazardous material storage and processing, emergency services (police, fire, rescue, and emergency medical services), and governmental services (embassies, diplomatic organizations, and management of vital records, welfare systems, and the judicial system). The loss of any of these often has an immediate, destabilizing, and life-threatening impact on the inhabitants.

TERRAIN

3-32. A terrain-focused reconnaissance provides the information requirements that a map or computer-assisted analysis cannot answer. Terrain-focused reconnaissance evaluates the military aspects of the terrain (observation and fields of fire, cover and concealment, obstacles, key terrain, and avenues of approach, [OCOKA]) and includes the effects of weather. Although doctrine traditionally focuses on the identification of bypasses around urban terrain, the nature of asymmetric warfare entails threat elements exploiting urban terrain to gain an advantage over US forces. The BCT must become familiar with the aspects of complex and urban terrain and its impact on a stability, support, and SSC environment. In a stability, support, or SSC environment, key terrain may be a religious or cultural monument, or a historic geographical boundary or town.

3-33. Urban areas include some of the world's most difficult terrain in which to conduct military operations. Urban areas vary immensely depending on their history, the cultures of their inhabitants, their economic development, the local climate, available building materials, and many other factors. This variety exists not only among different urban areas but also within any particular area. Urban areas present an extraordinary blend of horizontal, vertical, interior, exterior, and subterranean forms superimposed upon the landscape's natural relief, drainage, and vegetation. Troop leaders must become familiar with urban terrain characteristics discussed in FM 3-06 (FM 90-10).

SECTION II – RECONNAISSANCE PLANNING

PLANNING CONSIDERATIONS

3-34. The commander has specific considerations while conducting troop-leading procedures in planning reconnaissance missions. Critical to the troop commander's ability to execute his mission is to clearly understand his higher commander's reconnaissance guidance, including, as a minimum, the focus, tempo, and engagement criteria. The commander's reconnaissance guidance answers the three basic questions the troop commander needs to know to plan his mission and provide guidance to his platoons. The higher commander normally issues his reconnaissance guidance during mission analysis, but it may be issued earlier if necessary. He may also include the reconnaissance objective and the key tasks that must be accomplished to achieve that objective. It may be presented in a WARNO that enables the troop commander to initiate troop-leading procedures prior to receipt of the squadron order or the mounted BCT ISR order.

COMMANDER'S RECONNAISSANCE GUIDANCE

- ***Focus*** *of the reconnaissance:*
  - *Threat.*
  - *Society/human demographics.*
  - *Terrain (bridges, routes, defensible terrain/threat vs. threat).*
  - *Infrastructure (political situation, facilities, food distribution).*
- ***Tempo*** *of the reconnaissance:*
  - *Stealthy or forceful.*
  - *Deliberate or rapid.*
  - *Aggressive or discreet.*
- ***Engagement criteria*** *(if any):*
  - *What are the ROE?*
  - *What is a troop fight?*
  - *What weapon system is used to engage what target type?*
  - *What are the nonlethal (HUMINT) engagement criteria?*

3-35. The elements of reconnaissance guidance (focus, tempo, and engagement criteria) are interrelated. From the established focus, the commander is able to set the appropriate tempo. The tempo links the required reconnaissance tasks to the mission time constraints to determine the techniques and tempo of reconnaissance. Engagement criteria are linked to the focus and tempo by clarifying how the troop develops actions on contact. Given the focus and tempo, the engagement criteria provides the instructions on what the unit is expected to fight and what it is expected to hand over to a supporting or follow-on unit.

3-36. The **focus** of the reconnaissance allows the commander to identify and prioritize mission-related tasks. He can identify his specified, implied, and essential tasks and the information requirements that are most important to squadron and brigade operations. Focus is further defined as providing relevant information on specific terrain, threat forces, social factors, or infrastructure within a specified AO.

3-37. The **tempo** of the reconnaissance allows the commander to determine tactical employment to include methods and techniques within

the associated time constraints, as related to the focus of reconnaissance. The commander describes the tempo by answering the following questions (see Figure 3-1):

- Is the reconnaissance deliberate or rapid (how detailed or complete and how many tasks are to be accomplished)?
- Is the reconnaissance stealthy or forceful (what is the level of covertness)?
- Is the reconnaissance aggressive or discreet (will the unit fight for information and what is the potential for engagement)?
- Deliberate operations are slow, detailed, and broad-based. They require the accomplishment of numerous tasks. Significant time must be allocated to conduct a deliberate reconnaissance.
- Rapid operations are fast-paced with focus on key pieces of information. This type of operation entails a smaller number of tasks. It describes reconnaissance operations that must be performed in a time-constrained environment.
- Stealthy operations are conducted to minimize chance contact and prevent the reconnaissance force from being detected. They are often conducted dismounted and require increased allocation of time for success.
- Forceful operations are conducted without significant concern about being observed. They are often conducted mounted or by combat units serving in a reconnaissance role. It is also appropriate in a stability or support operation where the threat is not significant in relationship to the requirement for information.
- Aggressive operations have very permissive engagement criteria and allow the reconnaissance commander to engage in combat in order to meet his information requirements.
- Discreet operations have very restrictive engagement criteria, and restrain the reconnaissance forces from initiating combat to gain information.

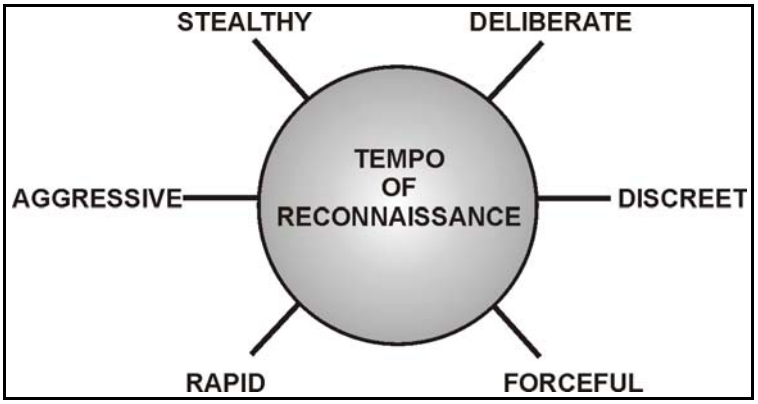


Figure 3-1. Tempo of Reconnaissance

3-38. The **engagement criteria** establish what the troop is allowed to engage and what they are expected to hand over to their higher headquarters or follow-on or supporting forces. Conversely, by understanding what the higher commander will allow the troop to engage during reconnaissance, coupled with his understanding of the threat's feasible courses of action, he is able to develop the platoon's engagement criteria. Additionally it allows the commander to develop his bypass criteria and plan how to maintain contact with bypassed threat elements. This enables the platoon leader to plan for the engagement of the specified threat if encountered.

NOTES: The BRT commander's involvement in ISR planning is: BCT ISR planning must be accomplished quickly and efficiently so that its ISR elements have sufficient time to conduct troop-leading procedures and execute operations in support of the BCT's decisive operation. Because of time constraints and the necessity to deploy reconnaissance (and surveillance) forces as early as possible, planning for reconnaissance must occur parallel with the higher headquarters decision-making process and ultimately support the higher headquarters decision-making process.

The BRT troop commander, based on unit SOPs and commander's guidance, may participate in planning for BCT ISR operations. The troop commander's or troop XO's involvement in the planning at the BCT level can facilitate some of the parallel planning at troop level and assist in identifying limitations, facilitate integration of GSR, UAVs, signal intelligence (SIGINT), task force R&S assets, and reconnaissance assets into a specific concept of operations for the BCT ISR operation.

The troop commander is not a staff officer, but a commander. He should not lose focus of his responsibilities as a troop commander, but must assist the BCT staff in planning, integrating, and supporting ISR operations, when necessary.

ADDITIONAL RECONNAISSANCE PLANNING CONSIDERATIONS

ANALYSIS OF THE MISSION

3-39. When the troop receives an R&S mission, the assigned AO is identified inside a solid, continuous boundary (see Figure 3-2). Phase lines may also be used to identify the troop's operational area (see Figure 3-3). The troop may have unit boundaries that also identify its operational area in a multidimensional reconnaissance mission (see Figure 3-4). This provides the initial focus (terrain) and allows the commander to begin analysis of the mission.

Figure 3-2. Troop Reconnaissance Defined by One Continuous Boundary; Platoon Defined by Boundaries

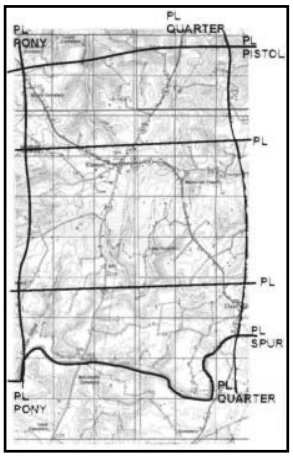


Figure 3-3. Troop Reconnaissance Defined by Phase Line; Platoon Defined by Phase Line

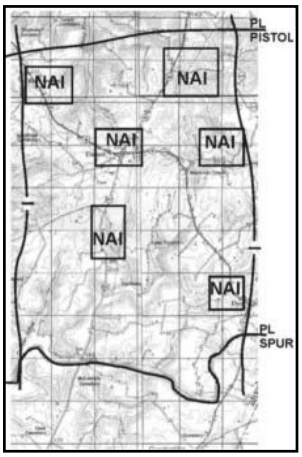


Figure 3-4. Troop Reconnaissance Defined by Boundary; Platoon Defined by NAI

3-40. In planning a reconnaissance mission, the troop commander must consider the following:

- Time available from mission receipt to completion.
- Threat size, composition, and disposition.
- Terrain and weather effects on the troop's maneuver.
- Task organization or attachments/detachments.
- Critical tasks to be accomplished IAW the collection plan.
- Operational tempo (OPTEMPO) (how long surveillance must be maintained).
- Troop personnel and equipment strengths and weaknesses.

3-41. Based on the considerations above, the troop commander develops his reconnaissance guidance as he analyzes the mission and may issue his reconnaissance guidance to subordinate leaders (by issuing a WARNO) to assist their troop-leading procedures. He addresses the three components of reconnaissance guidance as part of his concept of operations. The troop commander also determines the following:

- How critical tasks must be accomplished within the constraints of time, terrain, and threat.
- Higher headquarters requirements for information.
- Specified or implied tasks associated with the end state.

DEVELOPMENT OF A TENTATIVE PLAN

3-42. The commander makes a tentative plan describing how the troop will conduct reconnaissance, maintain surveillance, and accomplish its assigned tasks. The tentative plan must incorporate the concepts of cueing, mixing, integration, and redundancy at both the higher headquarters and troop levels. The troop may be augmented by supporting or attached elements. These elements or assets may be

retained under troop control, or they may be attached to a platoon for their use in the execution of the platoon's specified tasks.

3-43. The commander considers the factors of METT-TC while developing the tentative plan to conduct and sustain R&S operations. The commander must also consider the following while developing his tentative plan:

- Tactical employment and movement techniques IAW tempo.
- How to use effects to support maneuver.
- How attachments will be integrated into the troop's mission.
- Primary and alternate routes to NAIs or reconnaissance objective(s).
- Probable line of contact (LC) or probable point(s) of contact (POC).
- Infiltration start point (SP)/LD locations.
- Actions on contact/discovery.
- Subordinate unit specified tasks.
- Reconnaissance handover, to include:
  - Handover between the troop and its higher headquarters or follow-on forces.
  - Handover between subordinate elements within the troop.
- Communications plan (architecture and required support).

SECTION III – ACTIONS ON CONTACT

3-44. There are two types of contact the unit can expect and prepare for—known and chance. Known contact entails information and intelligence on known locations or positions of threat forces enabling ground reconnaissance units to gain contact under the most advantageous conditions. When there is no intelligence about the threat's location, ground reconnaissance or maneuver elements make chance contact, forcing deployment on ground of the threat's choosing. The BCT uses its ISR assets, to include its reconnaissance troop(s), to limit chance contact during operations, develop the situation for the BCT, and in effect pull the combat forces to the decisive point of the commander's choosing.

FORMS OF CONTACT

EIGHT FORMS OF CONTACT

Visual
Direct fire
Indirect fire
Obstacles
Aircraft
NBC
Electronic
Nonhostile

3-45. Both known and chance contact during reconnaissance and security operations occurs when the troop encounters any situation that requires an active or passive response to the threat. Contact is described in terms of the threat or friendly forces gaining contact through eight forms of contact. These situations may entail one or more of the following forms of contact:

- Visual contact (friendly elements may or may not be observed by the threat).
- Physical contact (direct fire) with a threat force.
- Indirect fire contact.
- Contact with threat obstacles or ones of unknown origin.
- Contact with threat or unknown aircraft.
- Situations involving NBC conditions.
- Situations involving electronic warfare (EW) tactics. Examples of electronic contact include:
  - GSR or IREMBASS.
  - SIGINT.
  - Radios jammed by threat force.
- Nonhostile (civilians or other events that may affect the mission). Examples of nonhostile contact include:
  - Refugee traffic on assigned routes.
  - Peaceful demonstrations in assigned NAIs.
  - Local or US media contact.
  - Disruption of electrical power or other vital services in AO.
  - Local government services (i.e., police, fire, postal) suspended.

3-46. Leaders at echelons from platoon through BCT conduct actions on contact when they or a subordinate element recognizes one of the forms of contact or receives a report of threat contact. Ideally, the unit will acquire the threat (visual contact) before being sighted by the threat; then it can continue with visual contact or initiate indirect contact or physical contact on its own terms by executing the designated COA. It is also essential for the troop commander to understand the higher commander's intent of the reconnaissance to recommend COAs for the brigade/squadron to react to the threat contact. The troop may conduct actions on contact in response to a variety of circumstances, including the following:

- Subordinate platoon(s)/section(s) conducting actions on contact.
- Reports from the squadron or BCT.
- Reports from GSR/IREMBASS (surveillance troop or BCT MI Company).

- Reports from SIGINT/PROPHET (surveillance troop or BCT MI Company).
- Reports from UAV (surveillance troop or BCT MI Company).
- Reports from or actions of an adjacent unit.

STEPS FOR ACTIONS ON CONTACT

3-47. Actions on contact are not intended to generate a rigid response to the threat. Rather, they provide an orderly framework that enables the troop and its subordinate elements to plan for and survive the initial contact, then apply sound troop-leading and timely actions to develop the situation.

3-48. Troop commanders and platoon leaders analyze the threat throughout the troop-leading process to identify all likely contact situations that may occur during an operation. Intelligence reports from higher help to clarify the threat's COAs and likelihood of contact. Through the planning and rehearsals conducted during troop-leading procedures, leaders develop and refine the scheme of maneuver that includes actions on contact for known and chance threat contact. The commander needs to consider how the likelihood of contact will affect his choice of movement techniques and formations. In doing this, he can begin preparing the unit for actions on contact; he may outline procedures for the transition to more secure movement techniques before a contact situation. For example, the commander identifies a threat dismounted OP along its axis of advance, he incorporates indirect fires into his scheme of maneuver to defeat the outpost. During operations when the troop's platoon makes contact with five threat dismounts, the commander can quickly assess that this is the anticipated contact and direct the troop to execute his plan. On the other hand, unexpected contact with a well-concealed threat force may require time to develop the situation at platoon and team levels. Known contact actions entail seven steps:

- Make contact through sensors and other ISR assets.
- Develop and evaluate the situation out of contact.
- Maneuver the force out of contact (choose how, with what, and where to make contact).
- Deploy and report (make contact on your own terms).
- Reevaluate and continue to develop the situation, if necessary.
- Choose and/or recommend a COA.
- Execute the selected COA.

3-49. Chance contact actions entail four steps similar to the last four from known contact actions:

- Deploy and report.
- Evaluate and develop the situation, as necessary.
- Choose and/or recommend a COA.
- Execute the selected COA.

3-50. Commanders must understand that properly executed actions on contact require time at both platoon and troop levels. To fully develop the situation, a platoon or team may have to execute extensive lateral movement, dismount and remount scout squads, and/or call for and adjust indirect fires. Each of these activities requires time. The commander must balance the time required for subordinate elements to conduct actions on contact with the need of the higher unit to maintain tempo and momentum. In terms of slowing the tempo of an operation, however, the loss of a platoon or team is normally much more costly than the additional time required to allow the subordinate element to properly develop the situation.

MAKE CONTACT THROUGH SENSORS AND OTHER ISR ASSETS

3-51. There will be information and intelligence on the threat in the troop AO. The troop should receive contact information from its higher headquarters, which has access through reach-back capabilities to JSTARS, SOF, intelligence operations, satellite imagery, Guardrail, and other ISR assets. The higher headquarters may augment theses cues with its sensor assets to make its initial contact. It may direct ground reconnaissance from this or provide direct support of or attachment of sensor assets (e.g., UAV, GSR, IREMBASS, or PROPHET) to the troop for it to make initial contact. The troop receives this contact information and updates through FBCB2 or radio reports.

DEVELOP THE SITUATION OUT OF CONTACT

3-52. The troop, or its higher headquarters, maintains sensor contact as it evaluates the situation out of visual contact. The troop or higher headquarters must decide whether the current information gained answers information requirements, or if another type of sensor is required to confirm, deny, or develop more detailed information about potential threat COAs. For example, a GSR contact of vehicle movement within an NAI may require a UAV reconnaissance at a subsequent NAI to confirm vehicle types. The UAV may be used to further develop the situation by targeting the force for indirect fires, to include precision munitions. The troop or its higher headquarters determines if ground visual contact with this threat element is required to further develop the situation, or pass the contact to other ISR assets or follow-on elements.

MANEUVER THE FORCE OUT OF CONTACT

3-53. Based on METT-TC and the current plan, the troop must decide how it will gain contact with the threat element under the most advantageous conditions. Depending on the situation and available resources, the troop commander decides how he will make contact, which subordinate element will make visual contact, and how he will maintain contact until ordered to break contact or until handover can occur. He must consider employing overlapping assets to effectively make contact and minimize risk. He also determines where to make contact based on terrain and the threat's probable COAs. The commander decides if direct fire or indirect fire is warranted under the ROE and engagement criteria. During operations, the commander may have to adjust his scheme of maneuver to enable ground contact to be made under the most favorable conditions for the troop and its subordinate elements.

DEPLOY AND REPORT

3-54. Against known contact the designated troop element deploys and gains visual contact using an appropriate technique based on METT-TC. The commander may coordinate supporting lethal or nonlethal fires to assist the element as necessary. For chance contact, subordinate elements deploy, using an appropriate immediate action battle drill. Battle drills are established through SOPs and IAW the OPORD and must be trained and rehearsed prior to the operation. Once deployed and visual contact is gained, the subordinate element reports using FBCB2 or FM. The troop forwards the initial contact and SPOTREPs to its higher headquarters IAW its SOP. Information provided must focus on the information requirements of the higher headquarters and, as a minimum, should address:

- The size of the threat element.
- The location, composition, activity, and orientation of the threat force.
- Threat weapon systems, especially antiarmor capabilities, and special equipment such as body armor or night-vision devices.
- The impact of obstacles and terrain.

REEVALUATE AND DEVELOP THE SITUATION

3-55. As the troop commander receives the initial reports from the observing element(s), he reevaluates (known contact) or evaluates (chance contact) the situation and, as necessary, continues to maneuver to develop it. The commander gathers as much information as possible from the elements in contact, visually confirming if possible or applicable. He analyzes the information to determine its relation to the higher commander's CCIR and its impact on operations, to include:

- Threat capabilities.
- Probable threat intentions.
- How to gain positional advantage over the threat (from the troop's and the BCT's perspective).
- The friendly situation (location, strength, and capabilities).
- Possible friendly COAs to achieve the specified end state.

3-56. After evaluating the situation, the commander may determine that he cannot answer the required information requirements to support the higher commander's decisions, or identify the threat's impact on current or future operations. To answer these information requirements, he must further develop the situation in accordance with the higher commander's intent, using one or any combination of the following techniques:

- Surveillance, using binoculars and other optical aids, employing recce scout squads/teams in a recon patrol.
- Mounted and/or dismounted maneuver, to include lateral maneuver, to gain additional information by viewing the threat from another perspective.
- Supporting lethal and/or nonlethal fires.

- Reconnaissance-by-fire when augmented or with permissive engagement criteria.

3-57. The troop uses follow-up SPOTREPs IAW its SOP to answer the information requirements and enable the higher headquarters to maintain SU and its COP.

RECOMMEND/CHOOSE A COA

3-58. After developing the situation to answer the information requirements, the troop commander determines how best to continue the mission IAW the higher commander's intent and his order. He may direct the troop to continue the mission based on the original scheme of maneuver and tasks to subordinate units, or he may have to revise his plan, select a new COA, and issue a FRAGO. If the COA meets the higher commander's intent and is within his troop's capabilities, he selects the COA and informs the commander prior to execution, if possible. If his COA is within the troop's capabilities, but deviates from the higher commander's intent, then he backbriefs the COA to his commander for approval. If he is unable to continue the mission with his available assets, he requests additional instructions or assistance from his commander.

3-59. The commander has several options in continuing his mission, to include:

- Leave a subordinate element to maintain contact with the threat element, and continue reconnaissance of the AO with the rest of the troop.
- Conduct reconnaissance handover with another element, and continue reconnaissance of the AO.
- Break contact, using fire and movement if necessary, and continue the mission.
- Continue to develop the situation, reorganizing as necessary, and continue reconnaissance to gather additional information about the threat contact.
- Establish a screen while maintaining contact with the threat force.
- Conduct a security drill to withdraw while maintaining contact.
- Take no action; continue reconnaissance within the AO.

EXECUTE THE SELECTED COA

3-60. The troop transitions to maneuver to execute the COA. It then continues to maneuver throughout execution, either as part of a tactical task or to advance while in contact to reach the point on the battlefield from which it executes its tactical task. As execution continues, more information will become available to the troop commander. Based on the emerging details of the threat situation, he may have to alter his COA during execution. For example, as the troop maneuvers with mortar and field artillery to destroy a target acquisition radar hidden in a barn, it discovers a motorized infantry platoon in prepared positions in and around the farmhouse. The commander must analyze and develop the new situation. He then selects and recommends an alternate COA to the

higher unit, such as establishing a surveillance position to support an infantry company team's maneuver against the newly discovered threat force.

SECTION IV – RECONNAISSANCE HANDOVER

3-61. Reconnaissance handover is the action that occurs between two elements to coordinate and transfer responsibility for observation (reconnaissance and/or surveillance) of threat contact, or the transfer of an assigned area from one element to another.

3-62. Reconnaissance handover is similar to battle handover in that it may be conducted in conjunction with other tasks such as relief in place, linkup, or passage of lines. Unlike battle handover, however, it does not imply the assumption of a fight or being within direct fire range. Instead, it focuses on planning for, preparing, and executing the passing of information, threat contact, or an assigned area and the related responsibility for it from one element to another.

3-63. This task provides the information connection, overlapping communications, and commander's reconnaissance focus (commander's focus may differ for each echelon) required when planning and executing layered ISR operations with multiple assets. Reconnaissance handover is normally associated with a designated handover coordination point to facilitate ground link-up or a phase line designated as the reconnaissance handover line (RHOL). It may be the handover of an AO, NAI, TAI, and/or threat contact. Reconnaissance handover can be visual, electronic, digital, analog, or any combination of these.

CONSIDERATIONS OF RECONNAISSANCE HANDOVER

3-64. ISR operations must be integrated with higher, lower, and adjacent units to provide a coordinated and integrated effort. Planning for these operations includes coordinating reconnaissance handover from Army Force (ARFOR)/division to brigade, brigade to squadron or troop, squadron to troop, squadron or troop to follow-on battalions, and between subordinate elements of the troop to the lowest level. This includes coordination between adjacent units/elements.

PLAN

3-65. Responsibility for the coordination of reconnaissance handover normally occurs from higher to lower units. Planning for reconnaissance handover may take place before an operation, or it may be conducted during operations as part of a change of mission. The troop commander integrates directed handovers by his higher headquarters into his scheme of maneuver. Using the control measures and criteria specified by his higher headquarters, the commander must designate who is responsible for accepting handover from an external element, and how handover will be transferred to other elements. He must also determine when and where to conduct handover between elements within the troop. If necessary, the commander develops additional control measures and criteria for reconnaissance handover within the troop. Pertinent control measures are then added to aid in C2.

PREPARE

3-66. The troop commences coordination as reconnaissance handover requirements between units are identified. The commander may find handover criteria in the remarks block of the higher headquarters ISR order. Coordination includes establishment of a communications plan between the units as necessary. The communications plan includes radio frequencies, net identifications (ID), EPLRS needlines, host files required to conduct the linkup (if units are from different maneuver control systems), and communications security (COMSEC) variables for communications. Recognition signals are established or confirmed to prevent friendly troops from exchanging fires.

3-67. The troop exchanges IR requirements to understand how it may answer or support the adjacent or follow-on unit's IR. For example, this will allow the BRT to understand the follow-on battalion's IR needs while remaining focused on the brigade's requirements. This understanding may lead to the transfer of vital information collected by the troop to the battalion during critical moments, such as identifying a security element along the battalion's axis of advance that is not a brigade PIR.

3-68. If necessary, the troop coordinates indirect fires and fire support coordination measures (FSCM), critical friendly zones (CFZ), preplanned targets, final protective fires, and smoke missions. This includes any criterion for preplanned or high pay-off target handover.

3-69. Coordination is conducted to identify the transfer and/or acceptance of C2 of elements between units as necessary. An example is for the troop to leave a scout section in contact with a threat security element, while the rest of the troop continues reconnaissance farther into the AO. As the BCT shifts the hand-off between the troop/squadron and the follow-on battalion, the follow-on battalion may accept C2 of the troop's scout section until one of its scout sections is able to relieve the troop's section from observing the threat element. Additionally, the higher headquarters may have on-order missions to other ISR assets to assist handover between the troop and other elements. An example of this is a UAV tasked to establish and maintain contact with a moving force while reconnaissance handover of the force is being conducted from troop to a follow-on battalion. As reconnaissance handover becomes imminent and final coordination begins, the UAV supports the reconnaissance handover. This level of coordination will allow the UAV maximum time on station, ensuring redundant observation during handover.

3-70. Rehearsals are of paramount importance before executing any plan. During rehearsals, reconnaissance handover coordination is confirmed and practiced to ensure clarity and understanding.

EXECUTE

3-71. The troop may conduct reconnaissance handover with follow-on or security (stationary) forces, accept reconnaissance handover from a forward force, or command and control the handover between subordinate elements.

3-72. When executing reconnaissance handover, liaison with a unit may consist of collocating the units' commanders, XOs, or CPs, if applicable. The follow-on battalion may attach a scout section to the troop

to facilitate C2 and handover. Every effort should be made to establish a face-to-face liaison. If a face-to-face linkup is not possible, establish a reliable digital and/or voice linkup to exchange critical information. As the distance closes between the forces, the requirement to maintain liaison and exchange information increases.

3-73. If face-to-face linkup is made, final coordination is completed and information is exchanged. Confirmation is made to ensure reconnaissance handover is complete as per specified criteria. If a target is being handed over, the criteria should require the accepting unit to acquire the target before handover is complete. The unit conducting reconnaissance handover may then be required to support the unit accepting the reconnaissance handover by executing the responsibilities of the stationary unit while conducting a forward passage of lines or relief in place. If follow-on forces are conducting an attack, the unit conducting the reconnaissance handover may facilitate the follow-on force's attack by conducting reconnaissance pull and by executing targeting, to include previously coordinated indirect fires.

EXAMPLES OF RECONNAISSANCE HANDOVER

NOTE. Although the following example depicts a recce troop from the cavalry squadron (RSTA) assigned to an SBCT, the same basic techniques apply to a BRT assigned to a mounted BCT.

3-74. During operations, JSTARS identifies threat forces moving into the SBCT's AO and preparing to cross the RHOL previously established forward of the SBCT (see Figure 3-5). As the threat approaches the RHOL, the SBCT's higher headquarters initiates reconnaissance handover to the SBCT, which in this case the squadron coordinates as the controlling headquarters for SBCT ISR operations. The squadron directs the surveillance troop to use sensors to gain contact with the threat forces forward of the RHOL, and have a UAV to gain contact along the RHOL and assist a ground troop in gaining visual contact. The troop is directed to gain contact within its AO. The surveillance troop directs a GSR team operating within the troop's AO to shift from its current NAI to another and establish contact with the advancing threat force forward of the RHOL. The UAV platoon is directed to establish contact with the threat force as it crosses the RHOL. It is determined from initial reports that the threat will advance into an infantry battalion's AO and an intelligence summary (INTSUM) is disseminated throughout the SBCT, and a WARNO is issued to the designated infantry battalion to prepare to accept handover of the threat force from the troop at the squadron/battalion RHOL.

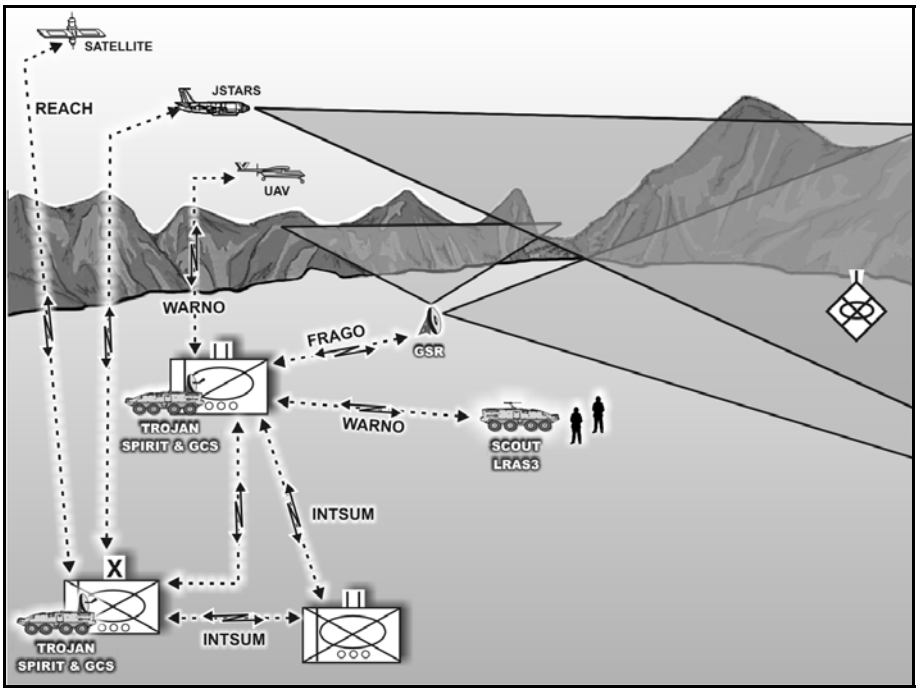


Figure 3-5. Reconnaissance Handover

3-75. The GSR team remains oriented on the NAI, forwarding reports that the surveillance troop uses to direct the UAV to the appropriate NAI. The troop ensures that its scout teams are positioned to gain and maintain contact with the threat force throughout its AO. After the scouts gain contact, the troop accepts handover from the surveillance troop using digital and electronic means. Upon confirmation that the troop has accepted handover, the surveillance troop redirects the GSR and UAV, as required or directed. The troop establishes or confirms communications with the infantry battalion. The troop may consider collocating its CP with the infantry battalion's TAC CP to further facilitate reconnaissance handover. The SBCT directs the battalion to attack and destroy the threat force, and the battalion's reconnaissance platoon moves to a designated RHO checkpoint to coordinate with the platoon in contact (see Figure 3-6). The squadron remains oriented on the brigade ISR mission, but supports the attacking battalion by directing fires against the threat force in support of SBCT shaping operations for the attack.

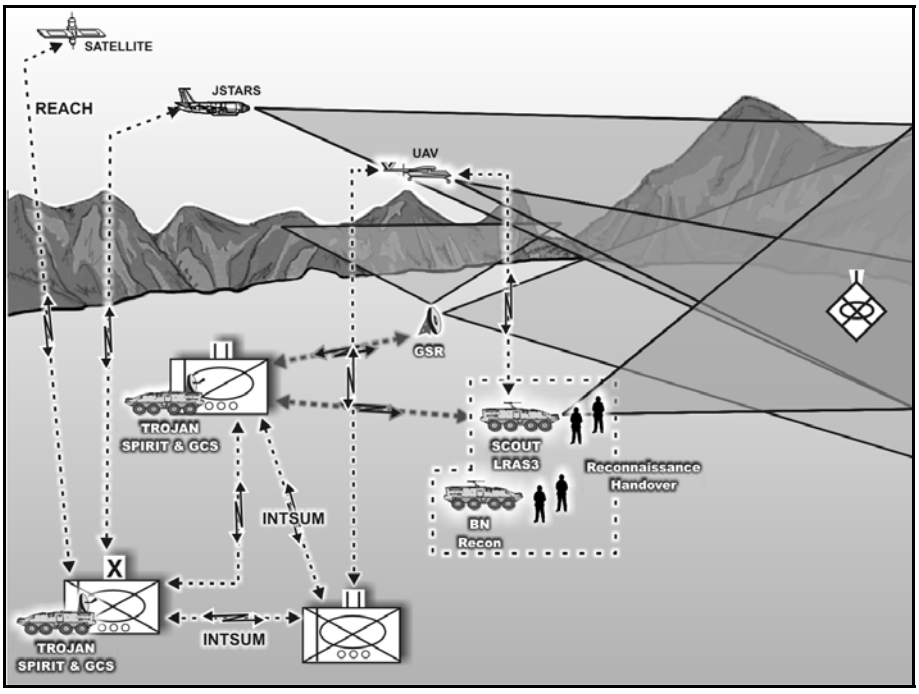


Figure 3-6. Reconnaissance Handover (continued)

3-76. The battalion and troop reconnaissance platoon leaders coordinate transfer of contact, and the battalion platoon positions to gain contact with threat force. After the battalion reconnaissance platoon establishes contact with the threat force, they focus their efforts to answer the battalion commander's CCIR and to support targeting (see Figure 3-7). Both the troop and the battalion reconnaissance platoon report to their higher headquarters when the criteria for handover between the troop and the battalion have been met. The squadron facilitates command and control of the reconnaissance handover, and provides additional information necessary to allow the attacking battalion the ability to attack at its own time and place(s) of choosing. When the troop confirms the battalion's acceptance of reconnaissance handover, it breaks contact with the threat force and continues its mission as directed. As the attack occurs, squadron ISR assets continue to support the battalion, reporting threat retrograde actions and/or approaching reinforcements.

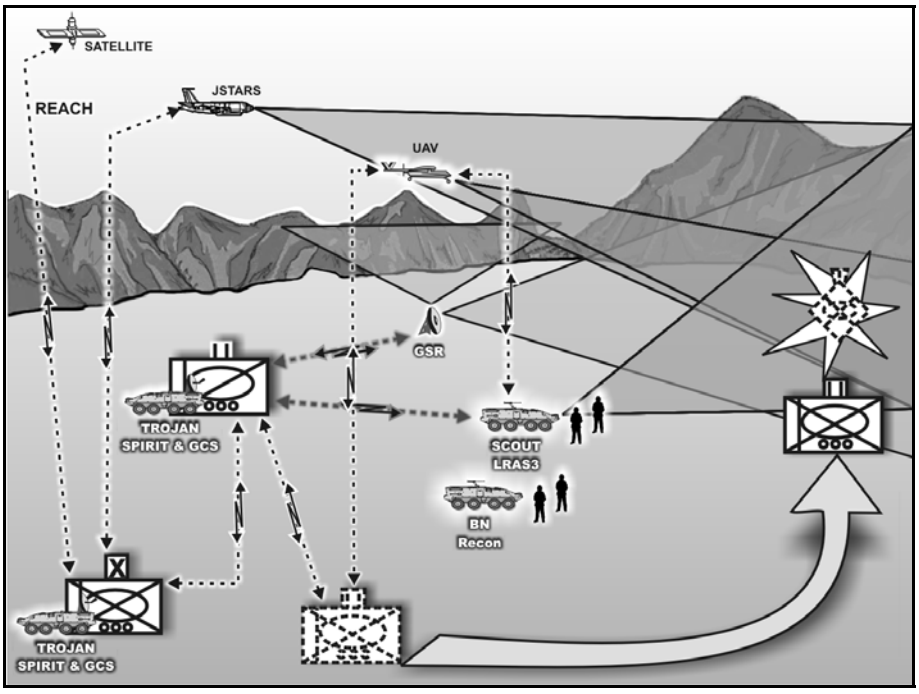


Figure 3-7. Reconnaissance Handover (continued)

SECTION V – TACTICAL EMPLOYMENT CONSIDERATIONS AND METHODS

RECONNAISSANCE METHODS

3-77. There are four reconnaissance methods: sensor, aerial, mounted, and dismounted. The troop's higher headquarters should use a combination of all methods in employing the reconnaissance fundamentals, providing depth and redundancy throughout the AO. The troop conducts mounted and dismounted reconnaissance. The troop commander may use a single method or a combination of methods to accomplish the reconnaissance mission based on the factors of METT-TC, the reconnaissance guidance (focus, tempo, engagement criteria), and the higher commander's intent. Though maneuver during a reconnaissance operation may be primarily mounted, dismounted activities are required to achieve stealth and security. Stealth is paramount in most reconnaissance operations. Mounted and dismounted surveillance may be used simultaneously, providing flexibility and capitalizing on the strengths of both methods. Effective reconnaissance relies on proper employment of mounted or dismounted reconnaissance, discipline, long-range acquisition, and maximum use of cover, concealment, and camouflage for stealth to avoid detection.

SENSOR RECONNAISSANCE

3-78. Sensor reconnaissance allows flexibility to economize reconnaissance assets. Sensors can be used to cover areas where contact may not be expected, but likely, or used for surveillance of areas that need to be covered over extended periods. Sensors may be employed as the "cue" for aerial, dismounted, and/or mounted reconnaissance. They

provide redundancy when assets are pushed forward to facilitate ground reconnaissance or extend surveillance distance between ground reconnaissance and the threat. Some sensor elements such as PROPHET may operate under higher headquarters control within the troop's AO, while other elements such as GSR or IREMBASS may be attached to the troop to facilitate ground reconnaissance.

3-79. The higher headquarters may direct sensor reconnaissance to—

- Conduct missions in a large AO.
- Surveil a flank (assume risk).
- Conduct missions of an extended duration.
- Conduct NBC reconnaissance for WMD or contaminated areas.
- Trigger (cue) a more thorough ground or aerial reconnaissance.
- Trigger reachback (PROPHET triggers gaining more information from Guardrail).

AERIAL RECONNAISSANCE (UNMANNED AERIAL VEHICLE)

3-80. Aerial reconnaissance provides a flexible, low-risk means of conducting reconnaissance to gain basic information in the least amount of time. Aerial reconnaissance may be used as a link between sensor and mounted or dismounted reconnaissance. Sensor operations cue a combination of aerial and dismounted/mounted methods. Normally aerial assets are controlled by its parent organization or higher headquarters; however, a troop may receive operational control (OPCON) of a UAV to facilitate air-ground coordination. This is done to support close reconnaissance with the threat, to ensure scout survivability, and to facilitate target acquisition.

3-81. Complex terrain, adverse weather, and threat deception/countermeasures can degrade the UAV's effectiveness. The troop may find the UAV ground control station (GCS) operating forward in its AO to facilitate reconnaissance in complex terrain or to maximize the UAV's operational range. Whenever a GCS operates within a troop's AO, both its parent organization and the troop commander must be aware of joint security and logistics/support requirements.

3-82. The higher headquarters may direct aerial reconnaissance when—

- Time is extremely limited or information is required quickly.
- Detailed reconnaissance is not required.
- Objective is at an extended range.
- Verification of a target is needed.
- Threat locations are known and extremely dangerous (high risk) to ground assets.
- Threat locations are vague, but identified as high risk to ground assets.
- Terrain is complex and weather conditions are favorable.

MOUNTED RECONNAISSANCE

3-83. Mounted reconnaissance enables a more rapid tempo, at the expense of stealth and security. Mounted reconnaissance increases the probability of threat detection, thus compromising reconnaissance efforts. Information is primarily gathered through mounted surveillance using high magnification vehicle-mounted sights to observe from a greater distance. Though a reconnaissance operation may be primarily mounted, dismounted activities will probably be required during the operation for security reasons.

3-84. The troop commander directs platoons to conduct mounted reconnaissance when—

- Time is limited.
- Distances require mounted movement.
- Stealth and security are not primary concerns.
- Detailed information is not required, or the mounted method affords the same opportunity to collect information as the dismounted method.
- Surveillance target allows vehicles to approach (terrain feature or road intersection in stability or support operations).
- Threat locations are known.

DISMOUNTED RECONNAISSANCE

3-85. Dismounted reconnaissance is the primary and most time-consuming means of reconnaissance for ground troops. This method permits the troop to collect the most detailed information about the threat, terrain, society, and infrastructure within a given area, zone, or along a route. Dismounted reconnaissance permits a troop to collect detailed information about a fixed site or threat from a close proximity. The troop is limited in the number of dismounted scouts it can employ at any time. For example, a scout section is required to operate a long-duration OP.

3-86. The troop commander may direct platoons to conduct dismounted reconnaissance when—

- Time is available.
- Detailed information is required.
- Reconnaissance target is a stationary threat, fixed site, or terrain feature.
- Stealth is required.
- Threat contact is expected or has been achieved through visual/electronic means.
- Reconnaissance vehicles cannot move through an area because of terrain or threat.
- Security is the primary concern.

INFILTRATION

3-87. Infiltration is a form of maneuver that entails movement by small groups or individuals at extended or irregular intervals through or into an area occupied by a threat or a friendly force in which contact with the

threat is avoided. The troop infiltrates through the AO to achieve the reconnaissance objective without having to engage the threat or fight through prepared defenses. This form of maneuver is slow and often accomplished under reduced visibility conditions. Synchronized ISR operations using other assets provide additional security for the troop by locating threat positions and identifying infiltration routes that avoid threat contact. The troop's higher headquarters uses UAVs, cued by imagery intelligence (IMINT), PROPHET, GSR, and IREMBASS, to locate gaps in threat positions and assist the troop in infiltrating.

3-88. Threat dispositions may require the BCT to attack and destroy specific elements in the disruptive zone, or to penetrate the defense to enable the troop to infiltrate. Another technique is for the BCT to conduct a limited feint or demonstration as a deception and enable the troop to infiltrate at another point.

PLANNING

3-89. Infiltration is one of the most difficult troop missions and must be resourced and supported by its higher headquarters. The troop requires detailed knowledge of the terrain and current threat information to enhance survivability and maximize chance for the success. The higher headquarters IPB, focused on identifying potential infiltration routes, using the capabilities of ASAS and digital topographic support system (DTSS), facilitates detailed terrain analysis. The analysis and control team (ACT) and ASAS databases can provide detailed threat dispositions and compositions to support infiltration planning. The S2 evaluates intelligence shortfalls, and the S3 tasks ISR assets to obtain more detail to support the infiltration mission. For example, he may task UAVs to conduct aerial reconnaissance of the proposed infiltration lanes or zone to obtain a current picture of the battlefield prior to and during movement of the ground scouts.

3-90. The XO and S3 review terrain analysis and threat data to identify gaps within threat dispositions and potential infiltration routes. *The troop commander participates with this analysis and determines whether he will move his troop as a unit or in echelon on single or multiple infiltration lanes.* The overriding factor in determining whether to use single or multiple lanes is the ability to remain undetected. Space and time separate forces moving along the infiltration lane. Moving the troop by platoons is faster and easier to control. Conversely, echeloned movement by sections or individual vehicles lessens the likelihood of detection due to the smaller size of the moving elements. The commander plans for lead elements to confirm clear routes, or transmits waypoints to follow-on elements.

3-91. The higher headquarters and troop commander must plan adequate time for infiltration to allow for potential delays and to ensure that the troop has sufficient time to reach its AO and subsequent primary or alternate rally points. Contingency plans should address aborting the infiltration, shifting elements during reconnaissance, and actions if an element fails to arrive or arrives late at the primary rally point. Alternate rally points are designated and used if—

- The primary rally point is occupied by the threat.
- The primary rally point is compromised.

- The primary rally point is found to be unsuitable before the infiltrating element reaches it.

EXECUTION

3-92. The troop commander positions himself in the infiltration order of movement that allows him to best exercise command and control. If a penetration is required, he may initially locate with the maneuver force command group. The troop CP and/or XO may collocate with the stationary force CP to coordinate the forward passage and fires. The commander and the CP/XO track forward movement using FBCB2, ensuring that FM reports are entered into the system. The commander modifies his scheme of maneuver based on METT-TC factors, and quickly submits FRAGOs via FBCB2 or FM to reorient his forces and ensure synchronization of effort.

INFILTRATION METHODS

3-93. The troop can move as a unit or echeloned by individual platoons. Infiltration can be executed mounted, dismounted, or a combination of the two. Depending on the availability of equipment and type of mission, the troop can infiltrate by foot, vehicle, rotary-wing aircraft, or watercraft to the objective.

Employment by Unit

3-94. This technique lends itself to command and control as the entire troop is infiltrating at once. The troop gains flexibility by using multiple lanes. The troop may infiltrate mounted and/or dismounted to conduct different reconnaissance missions.

Employment by Section

3-95. This technique lends itself to the flexibility required by a reconnaissance organization. It assists the troop in providing continuous reconnaissance by not committing the entire troop at one time. The troop moves on single or multiple lanes, mounted and/or dismounted, and enters the zone at different times and locations to conduct different reconnaissance missions.

Dismounted Infiltration

3-96. The troop commander may direct scouts to conduct dismounted infiltration when—

- Time is available.
- Stealth is required.
- Threat contact is expected or has been achieved through visual means.
- Scout vehicles cannot move through an area because of terrain or threat.
- Security is the primary concern.

Mounted Infiltration

3-97. The troop commander directs scouts to conduct mounted infiltration when—

- Time is limited.
- Threat locations are known.
- Distances require mounted movement.

3-98. Though an infiltration may be primarily mounted, dismounted activities may be required during the operation to achieve stealth and security.

Aerial Insertions

3-99. The aerial insertion of a troop is planned and conducted similar to an air assault operation. The planning team must include the BCT XO, S2, S3, S4, S6, FSO, air and missile defense coordinator (AMDCOORD), aviation liaison officer, Air Force air liaison officer (ALO), and the troop commander. The plan must account for deceptive actions, use of reserves, suppression of enemy air defense (SEAD), actions at the landing and pickup zones, re-supply, and MEDEVAC support. Deception inserts should be made en route to and when returning from the insertion. (See FM 3-18.12 [FM 90-4], FM 3-20.98 [FM 17-98], and Chapter 6 of this manual for more information related to aerial insertions.)

Single-lane Infiltration

3-100. Infiltration on a single lane is the least desirable technique. It requires all infiltrating groups to move at intervals in the same lane. This technique is used only when METT-TC analysis supports the identification of only one gap in the threat positions. The troop commander must consider the number of vehicles to be infiltrated, the time available, route concealment, and the vehicle time/distance interval that must be used to prevent detection. See Figure 3-8.

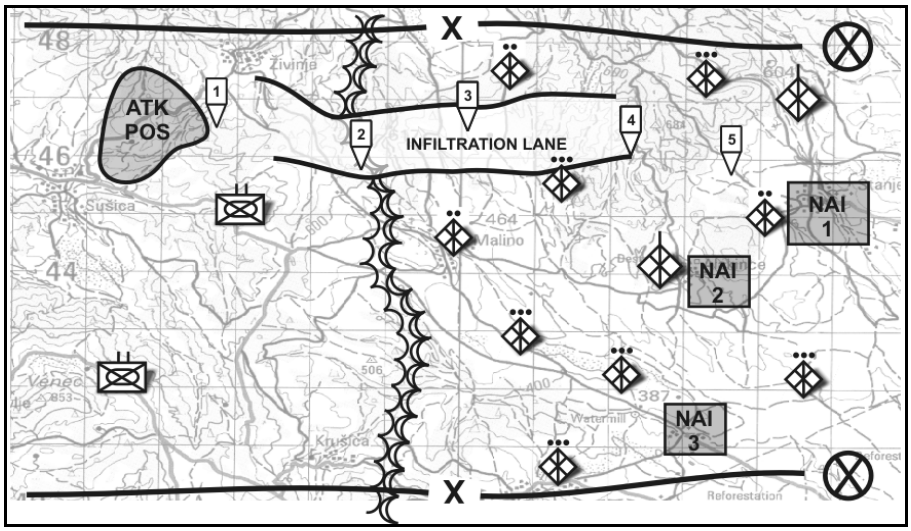


Figure 3-8. Single-lane Infiltration

Multiple-lane Infiltration

3-101. This is the preferred method of infiltration. The troop infiltrates by multiple lanes when two or more gaps are found through the threat defense. See Figure 3-9.

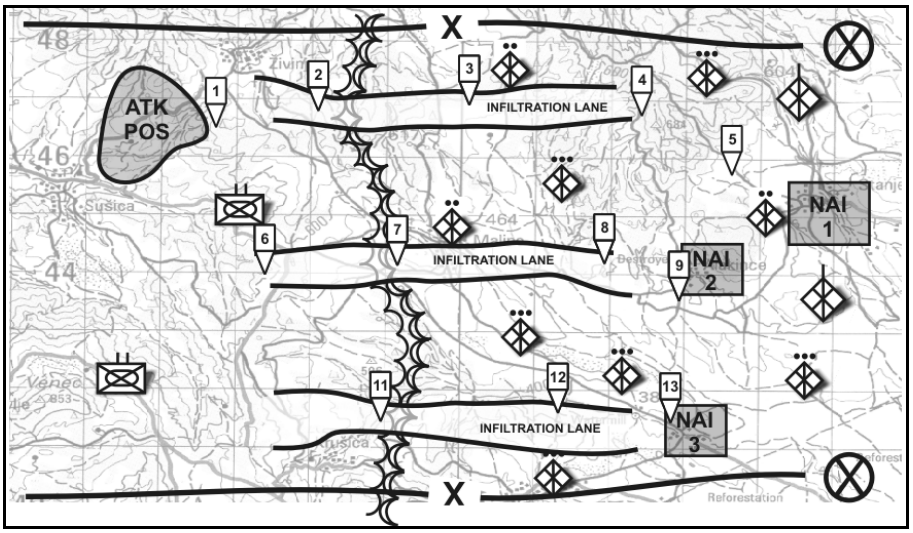


Figure 3-9. Multiple-lane Infiltration

INFILTRATION ACTIONS ON CONTACT

3-102. When reconnaissance elements infiltrate, the detection of one subordinate element may alert the threat and compromise the entire mission. The troop must have rehearsed techniques and procedures for actions with known and chance contact during infiltration. For example, if detected, subordinate elements return fire, break contact, and report. If the reconnaissance unit makes visual contact, but is not detected, it bypasses the threat force and continues the mission. The commander's intent must clearly state what the unit should do upon contact with the threat (tempo and engagement criteria).

3-103. The techniques and procedures may also address:

- Shifting to alternate infiltration lane.
- Actions at rally points and in the objective rally point (ORP).
- Actions upon loss of communications.

INFILTRATION CONSIDERATIONS

3-104. Infiltration is characterized by centralized planning and decentralized execution. Plans for infiltration are based on movement to the AO with the least risk of detection. The troop's higher headquarters must actively assist planning and preparation, to include using reconnaissance fundamentals to provide early warning and detection of the threat using imagery, SIGINT, GSR, IREMBASS, and other ISR assets. The commander uses the higher headquarters graphic control measures, NAIs, and collection requirements and objective in planning the infiltration. The location of assigned NAIs may affect the selection of an infiltration route or location of an ORP. Additional planning considerations include:

- Terrain analysis using IPB, imagery, and ground reconnaissance enables the troop to identify primary and alternate infiltration routes. These routes should avoid threat positions, obstacles, populated areas, silhouetting, main

avenues of approach, and movement along heavily populated routes and trails.

- Weather analysis to allow the infiltration during reduced visibility and NOD effectiveness.
- Threat analysis identifies the probable line for deployment, line of contact, battle positions, fighting positions, obstacles, security forces deployed for counter-reconnaissance, and times of reduced alertness.
- Concept of the operation describes the infiltration method, sequencing (by unit of echelon), and timing. The commander uses the assigned NAIs and information requirements to develop his reconnaissance focus and objective. He identifies primary and alternate rally points. Actions at rally points include the first scout element reaching the rally point, establishing security, and then using FBCB2 or FM to identify and exchange recognition signals with follow-on troop elements. The concept describes the higher headquarters deceptive actions and their purpose or relation to the infiltration. The commander identifies potential OPs, ORPs, and vehicle hide positions and prescribes actions on contact and infiltration abort criteria. The commander integrates fires to support the infiltration, to include priority of fires.
- Graphic control measures include checkpoints or TIRS to control movement and provide command and control flexibility. Checkpoints can be used as a rallying point if a scout element becomes misoriented, or is forced off the infiltration route or OP.
- Command and control procedures must support decentralized execution and include identification or retrans in follow-on sections to maintain contact with the lead elements.

EXFILTRATION

3-105. Exfiltration is the removal of personnel or units from areas under threat control by stealth, deception, surprise, or clandestine means. If the troop infiltrates to conduct its mission, it may be required to exfiltrate once the mission is complete. In this case, exfiltration is planned with infiltration and refined as the mission progresses. During other operations, troop elements may not withdraw in contact with lead elements (security drill), but may be required to maintain observation for follow-on forces. The commander must plan for exfiltration only in this case. The commander may also plan for contingency exfiltration should conditions force the troop or its subordinate elements to conduct an unplanned exfiltration. The troop order must address troop actions for both planned and unplanned exfiltration.

METHODS OF EXFILTRATION

3-106. Exfiltration can be accomplished via land, air, or water. Exfiltration by land with its organic vehicles is the most preferable method. Exfiltration by land is used when—

- Friendly lines are close.
- No other method is feasible.
- Areas along the route are largely uninhabited.

- Threat forces are widely dispersed.
- Threat forces are not conducting aggressive/active counterreconnaissance and security.
- Terrain degrades threat's ability to maneuver against exfiltration unit.

3-107. Extraction by air is favored when the resources are available and its use will not compromise the mission. These methods are used when—

- Long distances must be covered.
- The element cannot infiltrate by land or is in danger of being destroyed or captured.
- Time of return is essential.
- Cover and concealment are lacking.
- The threat does not have air superiority.
- The threat has not employed ADA assets in the AO.

EXFILTRATION CONSIDERATIONS

3-108. Planning considerations are similar to those for infiltration. The principles of route selection, movement formations, and movement security are observed during movement along exfiltration routes or to the extraction site. Exfiltration operations require additional time to account for unforeseen circumstances, such as inadvertent contact with threat forces or unexpected restrictive terrain. The following additional considerations are required to ensure a successful exfiltration:

- Exfiltration timing is critical from a standpoint of morale and mission accomplishment. Plans for extraction are made before the operation, with alternate plans for contingencies, such as the evacuation of sick or injured personnel.
- The plan must address actions on lost communications. When an element has missed a certain number of required transmissions, the commander assumes that the element has a communication problem, is in trouble, or both. The commander must prescribe a no-communication resupply and exfiltration plan that accounts for all possibilities.
- The plan must address alternate forms of exfiltration in addition to a link up with their vehicles. The OPORD may specify dismounted exfiltration or link up with friendly forces in an offensive operation. Any of these means may also be planned as an alternative if their vehicles cannot extract the team, or if capture is imminent.
- Exfiltration pick-up points for dismounts should be far enough away from the OPs to ensure the threat does not hear vehicle or helicopter noises. Mountains, dense foliage, and other similar terrain features can screen these noises. Under normal conditions, in flat, open terrain on a clear night, rotary-wing aircraft lose most of their audio signature at approximately a five-kilometer distance.
- Movement routes are planned that put ridgelines, rivers, and other restrictive terrain between the unit and threat forces.

- Primary and alternate linkup points should never be on a single azimuth leading away from the OP of an exfiltration route.

TACTICAL MOVEMENT

3-109. The troop commander must consider all aspects of his AO when organizing his assets and developing control measures. Even when the operational environment is linear for its higher headquarters, the troop may be operating in a noncontiguous environment (see Figure 3-10).

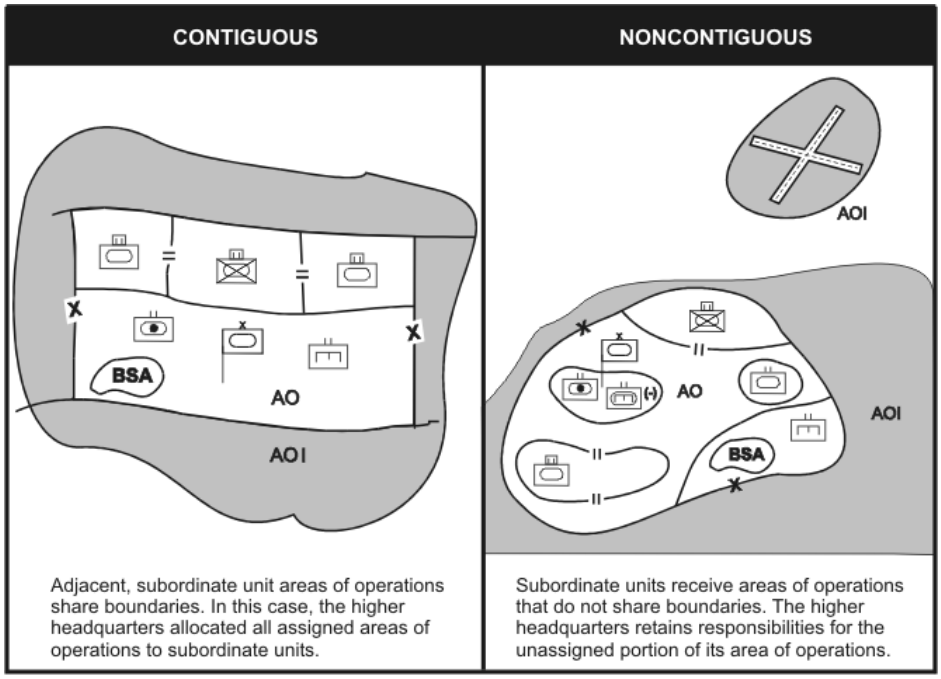

CONTIGUOUS
NONCONTIGUOUS
BSA
AO
AOI
AO
AOI
BSA
Adjacent, subordinate unit areas of operations share boundaries. In this case, the higher headquarters allocated all assigned areas of operations to subordinate units.
Subordinate units receive areas of operations that do not share boundaries. The higher headquarters retains responsibilities for the unassigned portion of its area of operations.

Figure 3-10. Contiguous versus Noncontiguous Environment

3-110. During operations, the troop's AO may encompass extended distances that do not support close troop formations. Under these conditions, or in a noncontiguous operational environment, the troop will be required to conduct decentralized operations. In these cases, the troop may deploy its platoons into separate AOs that are not mutually supportive. The platoons may be required to move in different directions, or some platoons may be stationary conducting surveillance, while others are conducting mounted or dismounted reconnaissance (see Figure 3-11).

3-111. The troop commander, XO, and CP, if applicable, should position to best command and control the troop while maintaining contact with its higher headquarters and adjacent units as necessary. This may require separation of the commander and the XO, or CP, by tremendous distances, requiring primary and alternate retrans assignments to maintain communications.

3-112. The troop commander usually places himself where he can best control the troop's actions. Usually this is trailing the lead platoon or the element he expects to make contact. He must determine where he can best see the battlefield without getting decisively engaged and losing

focus on the troop fight. In nontraditional formations, the troop commander may place himself with the main effort, or if applicable, collocate with the troop CP to facilitate command and control.

3-113. The XO is usually located at the troop CP, if applicable, controlling its movement and reporting information to higher headquarters. The commander can also position the XO with another platoon, such as the lead platoon conducting a zone reconnaissance. The commander then controls the operation from and moves with the trail platoon, monitoring specific HUMINT requirements or liaison with local leaders.

3-114. The troop combat trains is placed in a position that best supports the majority of the tasks or in a position to support the key tasks. The troop 1SG and the medics usually follow the troop's trail elements by one kilometer or terrain feature. The 1SG controls the medics while they are operating in the troop's AO. If the threat warrants the use of a trail platoon providing security during reconnaissance, the 1SG should position between the lead platoons and the rear security platoon.

3-115. The recce troop must place its mortars in a position that best supports the troop or high-risk platoon missions. Position the mortars in or near the center of the troop AO to provide indirect fire support across the troop front. Keep them positioned to fire about two-thirds and no less than one-third of their maximum effective range (about 3 to 5 kilometers, terrain dependent) beyond the scouts, so the scouts can engage threat forces at long range with indirect fires.

NOTE: Line of sight is the determining factor in range forward of the scouts. In densely wooded terrain, the scout's visibility may be only 100 to 200 meters forward of their front line trace, so mortar range need not always be 3,000 meters forward of the scouts.

SENSOR PLATOON

Establishes REMBASS field vicinity OP 4.

Sets GSR OP 3 oriented to support 1st Plt infiltration and surveillance.

Sets PROPHETS at OP 4 to orient on NAI 1.

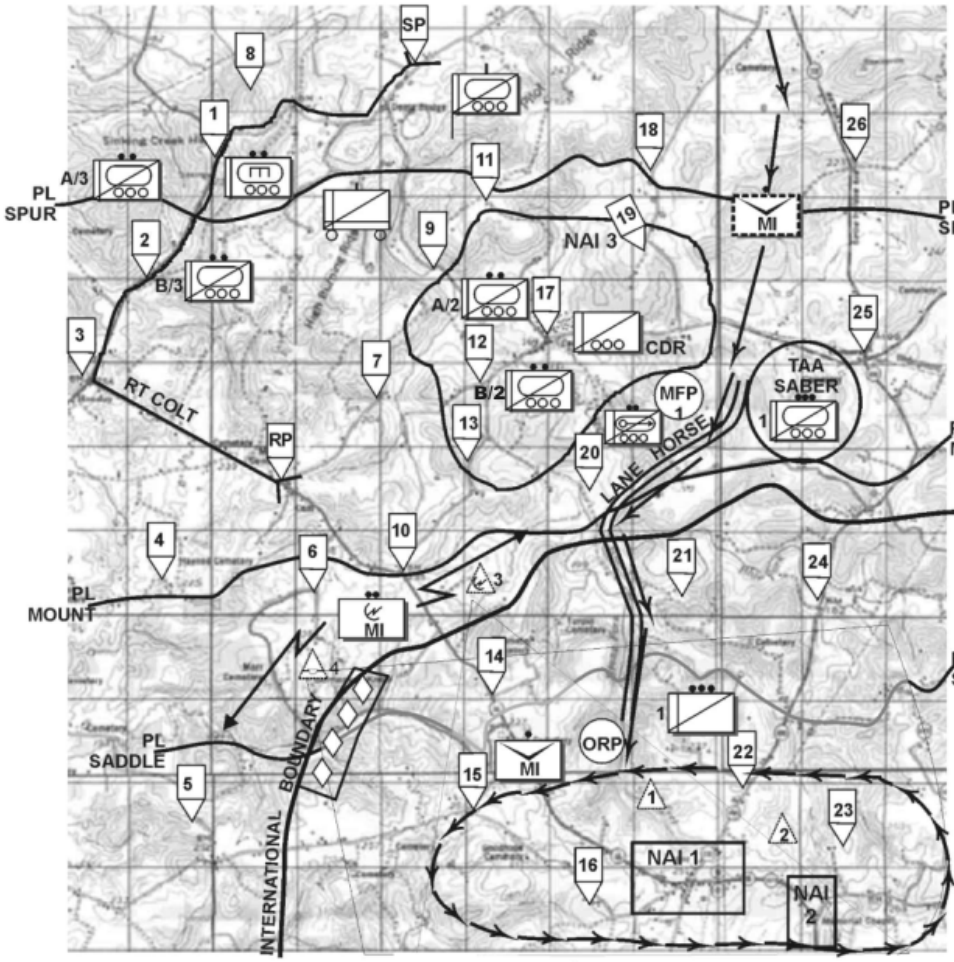
UAVs

Support infiltration and 1st Plt surveillance mission.

MORTARS

Mortars move and set firing point 1.

Prepare to support 1st Plt's mission and 2nd Plt's route reconnaissance.



1st PLATOON

Establishes TAA SABER.

Conducts dismounted infiltration along Lane Horse to establish surveillance of NAIs 1 & 2.

2nd PLATOON

A Section conducts mounted/ dismounted area recon of NAI 3, focused multi-dimensional recon of town at CP 17.

B Section QRF for the troop.

3rd PLATOON

With engineer section, conducts route recon or RT COLT.

Conducts multi-dimensional recon of route focused on CP 3.

Figure 3-11. Example of Troop Operations

SECTION VI – ZONE RECONNAISSANCE

3-116. Zone reconnaissance is the directed effort to obtain detailed information concerning all threat forces, routes, obstacles, and terrain within a zone defined by boundaries. A zone reconnaissance is assigned when the situation is vague or when information concerning cross-country trafficability is desired. It is appropriate when previous knowledge of the terrain is limited or when combat operations have altered the terrain. As with an area reconnaissance, the zone reconnaissance may be threat-, terrain-, society-, or infrastructure-oriented. It may include any orientation combination and be focused on specific requirements from the orientation such as the location of the threat's reserve or food distribution points within the troop's AO. Commanders must be aware that when the reconnaissance is focused on both combinations such as threat and terrain, the speed of the operation will be extremely slow, especially in complex terrain.

CRITICAL TASKS

3-117. Zone reconnaissance is a deliberate, time-consuming process; therefore, it must be focused within time constraints. During a zone reconnaissance, the troop accomplishes the critical tasks listed below unless specifically directed otherwise by the higher headquarters commander. The brigade/squadron commander, depending on the conditions of METT-TC and his critical information requirements, may select specific critical tasks for the troop to accomplish.

- Reconnoiter all terrain within the zone.
- Inspect and classify all bridges within the zone.
- Locate fords or crossing sites near all bridges in the zone.
- Inspect and classify all overpasses, underpasses, and culverts.
- Locate and possibly clear all mines, obstacles, and barriers in the zone within its capability.
- Locate a bypass around urban areas, obstacles, and contaminated areas.
- Locate and report all threat forces within the zone.
- Report reconnaissance information.

3-118. In addition to the critical tasks, the troop must be prepared to conduct other tasks as directed by the commander. These additional tasks may include the following:

- Recognize threat and countermeasures (identify threat activities and recommend threat probable COAs).
- Determine the size, location, and composition of the society demographics (e.g., race, sex, age, religion, language, tribe, clan, class, education, history, government, and/or factions).
- Establish and maintain contact with local civilian and military leadership.
- Reconnoiter the society to determine the regional, local, and neighborhood situations.

- Determine the needs of the society to decide operation/actions that will support a friendly populace or neutralize or gain support of a hostile or neutral faction.
- Identify key municipal infrastructure that can affect military operations (utilities, sewage, communications).
- Determine media activities.
- Clarify organizations and methods of operation for terrorists, transnational groups, and ethnic centers of power.
- Identify local populous allegiances to factions, religious groups, or other organizations.

3-119. *Commanders must guard carefully against over-tasking the troop or its subordinate elements.* The commander who directs a zone reconnaissance mission must remember the number and complexity of the tasks to be accomplished. The troop can accomplish its critical tasks and effectively reconnoiter a zone from 6 to 10 kilometers wide; however, the troop quickly exceeds its ability to accomplish the critical tasks if assigned a larger zone. The maximum width of the zone that the troop can effectively reconnoiter in accomplishing limited critical tasks is dependent on the time available, the depth of the zone, the complexity of the terrain, the nature of the threat, the troop's task organization, other collection assets being integrated, and the critical tasks the troop is being directed to perform. The commander must also consider the tempo of reconnaissance. An increased tempo limits the tasks that can be performed. If the commander desires a faster tempo, he must prioritize reconnaissance tasks for the troop.

EXAMPLE OF ZONE RECONNAISSANCE

3-120. When the troop receives a zone reconnaissance mission, the zone is usually identified by lateral boundaries with a line of departure (PL JAMIE) and a limit of advance (PL SUE) specified. The higher headquarters may include Army airspace command and control (A2C2) measures to facilitate aerial reconnaissance within the troop's AO.

3-121. The troop commander must have all the known information and intelligence of the operational environment. He must also coordinate to ensure support from other ISR assets available to the squadron and/or BCT to facilitate troop-leading procedures in developing his plan and support his reconnaissance. Because the threat situation is vague and knowledge of the terrain is limited, the troop's scheme of maneuver must also provide a good measure of protection for the troop as it executes the mission. When considering techniques for conducting a zone reconnaissance, the scheme of maneuver has to be flexible. The troop commander must convey his intent to subordinates so they can act quickly and without orders.

3-122. The commander considering the following as he develops his zone reconnaissance plan during troop-leading procedures (see Figure 3-12):

- The threat situation, to include:
  - Type and capabilities of likely threat weapons systems, night observation systems, and surveillance radar.

- Special equipment, such as ground sensors and signal intercept, may be addressed.
- Higher headquarters threat COAs, to include a situation template depicting composition, known and template dispositions, and potential engagement areas.

- Civilian considerations, to include:
  - Locations and jurisdictions of government agencies.
  - Compositions and dispositions of military, paramilitary, and law enforcement organizations.
  - Locations of police stations, armories or barracks, encampments, weapons holding areas, and staging areas.
  - Factions, key leaders, locations, compositions, and dispositions of known friendly, neutral, and belligerents, to include:
    - Recent trends in public opinion.
    - Intensity levels of current and past disturbances.
    - If required, effects from use of lethal force, against civilians.
  - If applicable, description and capabilities of uniforms, insignia, vehicles, markings, and equipment to include weapons and NODs.
  - Locations, functions, and purpose for nongovernmental organizations.
  - Locations of power generation/transformer facilities, water treatment plants, and food distribution points.
  - Locations of communications networks and media outlets.
- Terrain and weather considerations, to include:
  - Effects on effective ranges of weapons systems, laser designators, and NODs.
  - Effects on UAVs and other aviation assets for reconnaissance, transport, resupply, casualty evacuation, or fire support.
  - Effects on cross-country mobility.
  - Effects on civil functions and services.
- Friendly force considerations, to include:
  - Mission of adjacent and follow-on forces.
  - Higher headquarters and follow-on force reconnaissance objectives.
  - Higher headquarters and follow-on force CCIR.
  - Higher commander's reconnaissance focus, tempo, and engagement criteria, to include adjusting tempo and engagement criteria during reconnaissance.
  - Missions of ISR elements, such as a PROPHET, operating within the troop's AO, but not under troop control.
  - Capabilities and limitation of ISR elements, such as a GSR, that have been attached to or controlled by the troop.

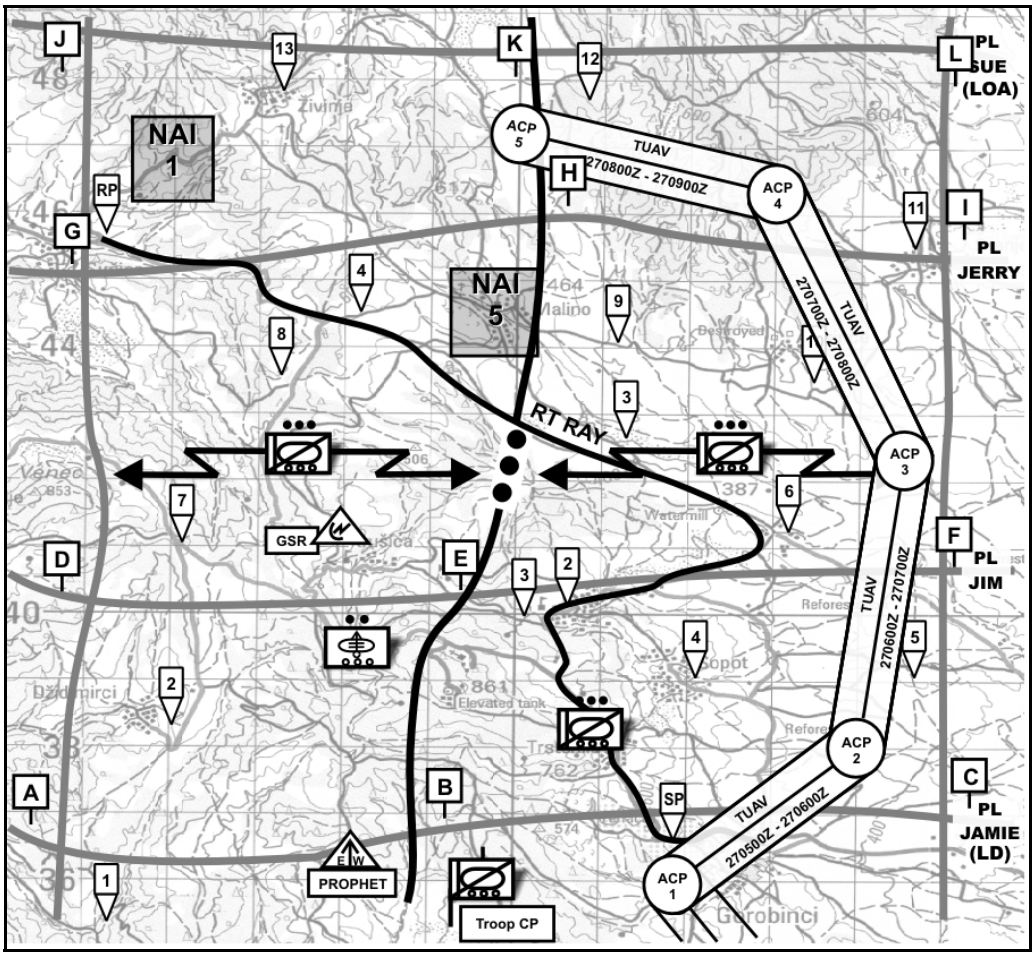


Figure 3-12. Situation for Zone Reconnaissance

3-123. The commander develops his intent that addresses the following:

- Key reconnaissance tasks that must be accomplished during the zone reconnaissance.
- Purpose for reconnaissance in relation to the higher headquarters reconnaissance objective.
- End state for reconnaissance.

3-124. The commander develops a concept of operation that describes, as a minimum—

- Focus and tempo for reconnaissance, to include changes to tempo based on anticipated contact or other requirements.
- Reconnaissance of the zone to answer the information requirements.
  - Determine if platoons should conduct zone, area, or route reconnaissance, or any combination of the three to enable the troop to complete its zone reconnaissance.
  - Identify platoon and other subordinate element tasks, to include reconnaissance, security, and follow and support, as required.

  - Determine task organization and subordinate unit AOs based on tasks and other METT-TC factors.
  - Integrate reconnaissance methods such as sensor, mounted, and dismounted reconnaissance and surveillance.
  - Determine deployment method and select movement techniques that support the tempo.
  - If necessary, identify infiltration route(s) against a higher threat.
  - If necessary, identify vehicle positions that allow utilization of onboard optics, such as LRAS3, to assist in observation and provide overwatch.
  - If necessary, determine requirements for short and long duration surveillance of NAIs.
  - If necessary, integrate urban assessment and information requirements (see Appendix D).
- Plan for establishing a screen upon reaching the limit of advance (LOA).
- Synchronization of target acquisition assignments with reconnaissance tasks.
  - Target description, location (known or template), and method of engagement.
  - Desired target effect and purpose for effect.
  - Criteria to change from target surveillance to designation (illumination).
- Integration of other elements or assets into the reconnaissance effort.
  - UAVs reconnoiter routes, infiltration lanes, or key and restrictive terrain within the AO.
  - PROPHET monitors for specified communications traffic or transmissions within designated areas containing suspected threat or supporting forces.
  - GSR orients on NAIs in advance of the platoons or on avenues of approach or routes on the flanks of the platoons' reconnaissance.
  - Ground sensors, such as IREMBASS, are emplaced on flank avenues of approach or routes leading into the troop AO.
  - Engineers assist with classification of bridges, overpasses, culverts, fords, routes, and obstacles.
- Locations and criteria for reconnaissance and target handover.
  - Accepting handover from or transferring to another element.
  - Conducting handover within the troop by subordinate elements.
- Priorities of fire and use of fires to maintain maximum range forward of the reconnaissance platoons.
- Bypass and engagement criteria during reconnaissance.
- If necessary, instructions for forward passage of lines.

- Commitment criteria and actions of the higher headquarters reaction force or reserve in support of the troop's infiltration, movement, and reconnaissance.
- Graphic control measures that support the concept of the operation, to include:
  - Boundaries identifying the troop's AO, platoon AOs, line of departure, and LOA.
  - For routes or lanes, designate start points, release points, and rally points for each route.
  - Phase lines, checkpoints, and contact points for coordination with other elements.
  - TIRS or GIRS to assist command and control.

3-125. CSS considerations include the following:

- Priorities for service support.
- Security requirements and techniques for combat trains or supporting service support elements.
- Movement and positioning of trains and logistical supply points.
- Resupply, to include emergency and caches.
  - Caches for Class I, III, IV, VIII, and other mission-specific items such as batteries.
  - Drop points away from vehicle hide and observation posts.
- Casualty consolidation and evacuation.
- Vehicle recovery, to include secured collection points and maintenance procedures.
- Equipment and supply destruction criteria.

3-126. Communications considerations include the following:

- Positioning of commander, XO or CP, and retrans to maintain communications with the higher headquarters and other designated elements.
- Method and techniques for communication between mounted and dismounted elements.
- If necessary, responsibilities and procedures for integrating supporting analog units into the troop digital network.

SECTION VII – AREA RECONNAISSANCE

3-127. An area reconnaissance is a directed effort to obtain detailed information concerning the terrain, threat activity, society and infrastructure within a prescribed area. These areas can include facilities, such as water plants, weapon storage sites, political headquarters, a village or town; or other areas, such as a suspected assembly area, cache site, or an airport complex. The troop can conduct decentralized reconnaissance in two or three areas simultaneously. The troop commander can conduct area reconnaissance by maneuvering elements through the zone or by establishing observation posts within

and/or external to the area. The troop commander must also plan for movement to the designated area. Tactical movement, road march, infiltration, or conducting a zone reconnaissance to the area are common methods.

CRITICAL TASKS

3-128. During an area reconnaissance, the following critical tasks must be accomplished unless the troop commander directs otherwise:

- Reconnoiter all terrain within the area.
- Inspect and classify all bridges within the area.
- Locate fords or crossing sites near all bridges within the area.
- Inspect and classify all overpasses, underpasses, and culverts.
- Locate and mark all mines, obstacles, and barriers in the area.
- Locate a bypass around urban areas, obstacles, and contaminated areas.
- Find and report all threats within the area (identify threat activities, deceptive measures, and recommend threat probable COAs).

3-129. In addition to the primary tasks, the troop must be prepared to conduct other tasks as directed by the commander. These additional tasks may include the following:

- Determine size, location, and composition of societal demographics (e.g., race, sex, age, religion, language, tribe, clan, class, education, history, government, and/or factions).
- Establish and maintain contact with local civilian and military leadership.
- Reconnoiter the society to determine the regional, local, and neighborhood situations.
- Determine the needs of the society to decide operation/actions that are needed to support a friendly populace, or to neutralize or gain support of a hostile or neutral faction.
- Identify key municipal infrastructure that can affect military operations (utilities, sewage, communications).
- Determine media activities.
- Clarify organizations and methods of operation for terrorists, transnational groups, and ethnic centers of power.
- Identify local populous allegiances to factions, religious groups, or other organizations.

EXAMPLE OF AREA RECONNAISSANCE

3-130. As with the zone reconnaissance, the troop commander must ensure the troop has all the known information and intelligence of the AO. In addition to boundaries, phase lines, and A2C2 measures, the higher headquarters may designate troop infiltration lanes. The commander determines the infiltration method and sequence. At times, the commander may be required to identify the infiltration lanes. In these cases he must use reconnaissance during his troop-leading

procedures to identify and select infiltration lanes. He must coordinate support from other ISR assets available to the squadron and/or BCT to assist with this reconnaissance. Information from SIGINT and IMINT can assist the commander develop and complete his scheme of maneuver during troop-leading procedures. IMINT facilitates a detailed map reconnaissance in determining how terrain supports movement. The commander views the terrain not only from the perspective of how it supports his mission success but also from the threat's perspective. Measurement and signature intelligence (MASINT) assets should be focused on restricted terrain or high-speed avenues of approach to provide early warning of potential threat movements. UAV(s) can support infiltration and reconnaissance to provide early warning and reconnaissance of areas that are restricted to the ground troop.

3-131. The commander considers the following as he develops his area reconnaissance plan during troop-leading procedures (see Figure 3-13):

- The threat situation, to include:
  - Types and capabilities of likely threat weapons systems, night observation systems, and communications systems.
  - Special equipment, such as body armor, may be addressed.
  - Higher headquarters threat COAs, to include a SITEMP depicting composition, known and template dispositions, observation or combat outposts, patrols, and potential engagement areas.
- Civilian considerations, to include:
  - Locations of government offices, political party headquarters, and nongovernmental organizations.
  - Compositions and dispositions of regional/local military, paramilitary, and law enforcement organizations.
  - Factions, key leaders, locations, compositions, and dispositions of known friendly, neutral, and belligerents, to include:
    - Recent trends in public opinion.
    - Intensity levels of current and past disturbances.
    - If required, effects from use of lethal force against civilians.
  - If applicable, description and capabilities of uniforms, insignia, vehicles, markings, and equipment, to include weapons and NODs.
  - Locations of police stations, armories or barracks, encampments, weapons holding areas, and staging areas.
  - Locations of power generation/transformer facilities, water treatment plants, and food distribution points.
  - Locations of communications networks and media outlets.
- If applicable, an urban operations sketch that portrays key terrain, to include:
  - Safe havens.
  - Hospitals.
  - Police stations and armories or equivalent.

- Embassies.
- Power generation, communication, and water treatment facilities.
- Restricted or protected areas designated by the ROE.
- Hazardous areas, to include:
  - Above- or below-ground natural gas or other fuel storage.
  - Construction sites.
  - Intersections and bridges.
  - Known hostile, belligerent, or criminal areas.
- Major terrain features such as:
  - Buildings that mask or interfere with communications or GPS.
  - Parks.
  - Industrial complexes.
  - Airports.
- Avenues of approach, to include:
  - Main thoroughfares and/or improved road surfaces.
  - Escape and evasion routes or corridors.
  - Subterranean routes and access.

- Terrain and weather considerations, to include:
  - Effects on effective ranges of weapons systems, laser designators, and NODs.
  - Effects on UAVs and other aviation assets for reconnaissance, transport, resupply, casualty evacuation, or fire support.
  - Effects on cross-country mobility.
  - Effects on civil demonstrations or services.
- Friendly force considerations, to include:
  - Mission of adjacent and follow-on forces.
  - Higher headquarters and follow-on force reconnaissance objectives.
  - Higher headquarters and follow-on force CCIR.
  - Higher commander's reconnaissance focus, tempo, engagement criteria, to include adjusting tempo and engagement criteria during reconnaissance.
  - Missions of ISR elements, such as PROPHET, supporting troop movement, and/or reconnaissance.
  - Missions of ISR elements, such as GSR or IREMBASS, operating within the troop AO but not under troop control.
  - Capabilities and limitation of ISR elements, such as a GSR, that have been attached to or controlled by the troop.

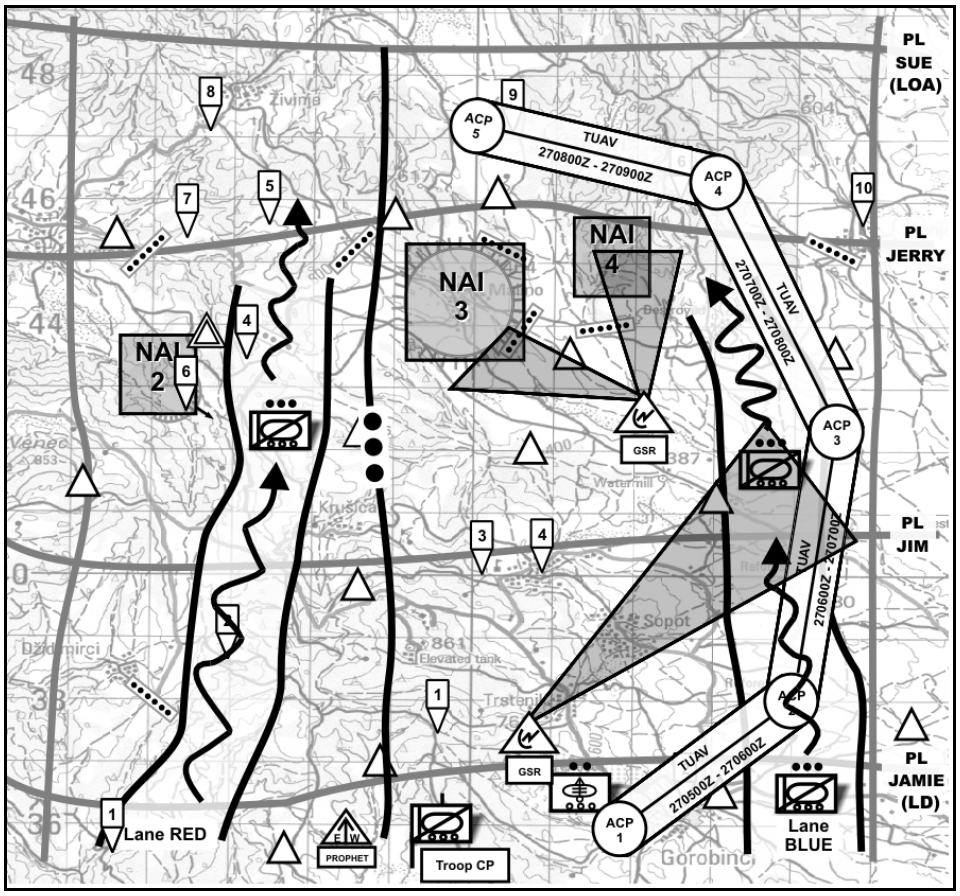


Figure 3-13. Situation for Area Reconnaissance

3-132. The commander develops his intent that addresses the following:

- Key reconnaissance tasks that must be accomplished during the area reconnaissance.
- Purpose for reconnaissance in relation to the higher headquarters reconnaissance objective.
- End state for reconnaissance.

3-133. The commander develops a concept of operation that describes, as a minimum:

- Focus and tempo for reconnaissance, to include changes to tempo based on anticipated contact or other requirements.
- Movement to the areas to be reconnoitered, to include techniques and formations, if applicable.
  - Select movement techniques that support the tempo and avoid known threat forces outside the areas to be reconnoitered.
  - Select the route(s) and establish a march order on each route.
  - Identify infiltration route(s) against a higher threat and establish an order of march.

- Identify dismount point and suitable concealed locations to position vehicles prior to conducting the reconnaissance.
- Identify vehicle positions that allow utilization of onboard optics, such as LRAS3, to assist in observation and provide overwatch.

- Reconnaissance of the designated areas to answer the information requirements.
  - Platoon and other subordinate element tasks, to include reconnaissance, security, and follow and support, as required.
  - Determine task organization and subordinate unit AOs based on tasks and other METT-TC factors.
  - Integration of reconnaissance methods, to include sensor, mounted, and dismounted reconnaissance and surveillance.
  - Requirements for short and long duration surveillance of NAIs.
  - Urban assessment and information requirements (see Appendix D).
- Synchronization of target acquisition assignments with reconnaissance tasks.
  - Target description, location (known or template), and method of engagement.
  - Desired target effect and purpose for effect.
  - Criteria to change from target surveillance to designation (illumination).
- Integration of other elements or assets into the reconnaissance effort.
  - UAVs reconnoiter routes, infiltration lanes, or key and restrictive terrain within the AO.
  - PROPHET monitors for specified communications traffic or transmissions within the designated areas, or within other areas containing threat reserves or supporting forces.
  - GSR orients on NAIs in advance of the platoons or on avenues of approach or routes on the flanks of the platoons' reconnaissance.
  - Ground sensors, such as IREMBASS, are emplaced on flank approaches or routes into the designated area or leading to NAIs within the area.
  - Engineers assist with classification of bridges, overpasses, culverts, fords, routes, and obstacles within the designated area.
- Locations and criteria for reconnaissance and target handover.
  - Accepting handover from or transferring to another element.
  - Conducting handover within the troop by subordinate elements.

- Priorities of fire and use of fires to maintain maximum range forward of the reconnaissance platoons.
- Bypass and engagement criteria both during movement to and reconnaissance of designated areas.
- Commitment criteria and actions of the higher headquarters reaction force or reserve in support of the troop's infiltration, movement, and reconnaissance.
- Graphic control measures that support the concept of the operation to include:
  - Boundaries identifying the troop's AO, platoon AOs, and a line of departure.
  - For routes or lanes, designate start points, release points, and rally points for each route,
  - Phase lines, checkpoints, and contact points for coordination with other elements.
  - Areas to be reconnoitered.
  - TIRS or GIRS to assist command and control.

3-134. CSS considerations include the following:

- Priorities for service support.
- Security requirements and techniques for combat trains or supporting service support elements.
- Movement and positioning of trains and logistical supply points.
- Resupply to include emergency and caches.
- Caches for Class I, III, IV, VIII, and other mission-specific items, such as batteries.
- Drop points away from vehicle hide and observation posts.
- Casualty consolidation and evacuation.
- Vehicle recovery to include secured collection points and maintenance procedures.
- Equipment and supply destruction criteria.

3-135. Communications considerations include the following:

- Positioning of commander, XO or CP, and retrans to maintain communications with the higher headquarters and other designated elements.
- Method and techniques for communication between mounted and dismounted elements.
- If necessary, responsibilities and procedures for integrating supporting analog units into the troop digital network.

SECTION VIII – ROUTE RECONNAISSANCE

3-136. Route reconnaissance is a directed effort to gain detailed information about a specific route and the terrain on either side of the route that the threat could use to influence movement along the route. In

a permissive environment, a route may be assigned to each platoon, depending on the terrain. If threat contact is likely, as in an SSC or an MTW, only one route may be reconnoitered. A route reconnaissance is often a specified or implied task in a zone or area reconnaissance mission.

CRITICAL TASKS

3-137. During a route reconnaissance, the following critical tasks must be accomplished unless the troop commander directs otherwise:

- Reconnoiter and determine trafficability of the route.
- Reconnoiter all terrain the threat can use to place direct fires on the route.
- Reconnoiter all built-up areas along the route.
- Reconnoiter all lateral routes in the area of responsibility.
- Inspect and classify all bridges along the route.
- Locate fords or crossing sites near all bridges along the route.
- Inspect and classify all overpasses, underpasses, and culverts.
- Reconnoiter all defiles along the route; possibly clear all defiles of threat and obstacles within its capability, or locate a bypass.
- Locate mines, obstacles, and barriers, and within its capability, clear the route.
- Locate a bypass around obstacles and contaminated areas.
- Locate a bypass around or, if the mission requires, routes through built-up areas.
- Report route information.
- Find and report all threats that can influence movement along the route.

3-138. In a permissive environment, the troop may reconnoiter up to three routes when security is not required. Only one route can be reconnoitered when the security must provide security for the route classification.

EXAMPLE OF ROUTE RECONNAISSANCE

3-139. The higher headquarters specifies the route, to include the start point, release point, and other critical points along the route. It establishes A2C2 measures, specifies the reconnaissance start time, and may designate a completion time. Using the provided IPB and imagery, the troop commander analyzes the terrain to gain an appreciation of the danger areas within his zone and the nature of the potential threat. He must determine how much terrain on each flank of the route must be reconnoitered. Higher headquarters constraints or restrictions may also influence how much terrain is reconnoitered. Again, he must coordinate to ensure support from other ISR assets available to the squadron and/or BCT both prior to and during reconnaissance. The troop commander may also direct a platoon to conduct a route reconnaissance as a specific task in another mission.

3-140. The troop normally performs a tactical road march to the line of departure and deploys to execute the reconnaissance of the route. Based

on the amount of intelligence known about the threat, the troop commander determines how much security is required for the move forward to the line of departure. Also the commander should consider the effect his final disposition of forces will have on the troop's follow-on mission. The commander considers these effects as he develops his route reconnaissance plan during troop-leading procedures (see Figure 3-14):

- The threat situation, to include:
  - Type and capabilities of likely threat weapons systems, night observation systems, and communications systems.
  - Special equipment, such as body armor, may be addressed.
  - Higher headquarters threat COAs, to include a SITEMP depicting composition, known and template dispositions, and potential engagement areas.
    - Ambushes along the route in close or restricted terrain or tied to obstacles along the route.
    - Attack by long-range direct or indirect fires from dominating terrain along the route.
- Civilian considerations, to include:
  - Jurisdictions of local government agencies that encompass the route.
  - Relief and other nongovernmental organizations using the route.
  - Refugee and displaced civilians using the route.
  - Compositions and dispositions of regional/local military, paramilitary, and law enforcement organizations.
  - Factions, key leaders, locations, compositions, and dispositions of known friendly, neutral, and belligerents, to include:
    - Recent trends in public opinion.
    - Intensity levels of current and past disturbances.
    - If required, effects from use of lethal force against civilians.
  - If applicable, description and capabilities of uniforms, insignia, vehicles, markings, and equipment, to include weapons and NODs.
  - Locations of police stations, armories or barracks, encampments, and staging areas.
  - Locations of communications networks and media outlets.
- Terrain and weather considerations, to include:
  - Effects on effective ranges of weapons systems, laser designators, and NODs.
  - Effects on UAVs and other aviation assets for reconnaissance, casualty evacuation, or fire support.
  - Effects on cross-country mobility.
  - Effects on civilian traffic flow.
- Friendly force considerations, to include:
  - Higher headquarters and follow-on force reconnaissance objectives.

- Higher headquarters and follow-on force CCIR.
- Higher commander's reconnaissance focus, tempo, engagement criteria, to include adjusting tempo and engagement criteria during reconnaissance.
- Missions of ISR elements, such as PROPHET or UAV, supporting troop reconnaissance.
- Missions of ISR and other elements operating within the troop AO but not under troop control.

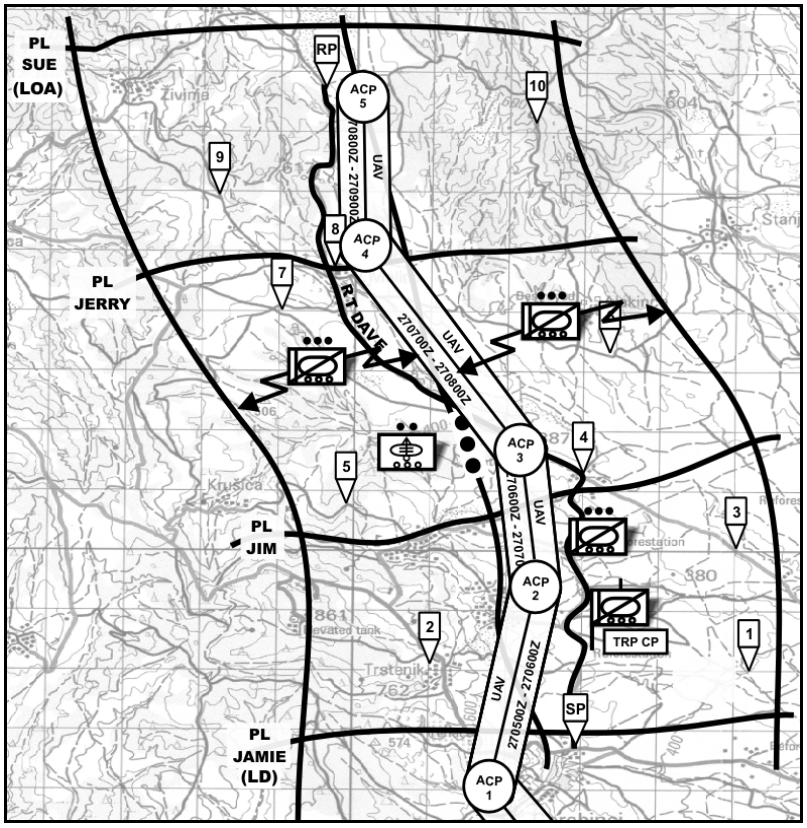


Figure 3-14. Situation for Route Reconnaissance

3-141. The commander develops his intent that addresses the following:

- Key reconnaissance tasks that must be accomplished during the route reconnaissance.
- Purpose for reconnaissance in relation to the higher headquarters reconnaissance objective.
- End state for reconnaissance.

3-142. The commander develops a concept of operation that describes, as a minimum:

- Focus and tempo for reconnaissance, to include changes to tempo based on anticipated contact or other requirements.
- Reconnaissance of the route to answer the information requirements.

  - Determines requirements to reconnoiter and classify the route, or designated portions of the route.
  - Determines requirements to conduct a zone reconnaissance of designated terrain to either side of the route.
  - Identifies platoon and other subordinate element tasks, to include reconnaissance, security, and follow and support, as required.
  - Determines task organization and subordinate unit AOs based on tasks and other METT-TC factors.
  - Integrates reconnaissance methods, to include sensor, aerial, mounted, and dismounted reconnaissance and surveillance.
  - Selects movement techniques that support the tempo.
  - Determines actions at built-up areas and actions on contact with threat forces or civilians.
  - If necessary, identifies vehicle positions that allow utilization of onboard optics, such as LRAS3, to provide overwatch.
  - If necessary, integrates urban assessment and information requirements.
- Transition to follow-on mission after completing the reconnaissance or reaching the LOA.
- If necessary, synchronization of target acquisition assignments with reconnaissance tasks.
  - Target description, location (known or template), and method of engagement.
  - Desired target effect and purpose for effect.
  - Criteria to change from target surveillance to designation (illumination).
- Integration of other elements or assets into the reconnaissance effort.
  - UAVs reconnoiter routes or key and restrictive terrain along the route.
  - PROPHET monitors for specified communications traffic or transmissions within the designated areas containing threat or supporting forces.
  - GSR orients on lateral routes and on the flanks of the route.
  - Engineers assist with classification of bridges, overpasses, culverts, fords, routes, and obstacles along the route.
  - NBC reconnaissance reconnoiters for contamination and bypasses.
- Locations and criteria for reconnaissance handover.
  - Accepting handover from or transferring to another element.
  - Conducting handover within the troop by subordinate elements.
- Priorities of fire and use of fires to maintain maximum range forward of the reconnaissance platoons.

- Bypass and engagement criteria both for elements conducting route classification and zone reconnaissance.
- Commitment criteria and actions of the higher headquarters reaction force or reserve in support of the troop's infiltration, movement, and reconnaissance.
- Graphic control measures that support the concept of the operation, to include:
  - Boundaries identifying the troop's AO and subordinate element boundaries lateral to the route to support zone reconnaissance on the flanks.
  - Routes, to include start points, release points, and other checkpoints for other critical points.
  - Phase lines, contact points for coordination with other elements, and the LOA.
  - TIRS or GIRS to assist command and control.

3-143. CSS considerations include the following:

- Priorities for service support.
- Security requirements and techniques for combat trains or supporting service support elements.
- Movement and positioning of trains and logistical supply points.
- Emergency resupply.
- Casualty consolidation and evacuation.
- Vehicle recovery, to include secured collection points and maintenance procedures.

3-144. Communications considerations include the following:

- Positioning of commander, XO or CP, and retrans to maintain communications with the higher headquarters and other designated elements.
- Methods and techniques for communication between mounted and dismounted elements.
- If necessary, responsibilities and procedures for integrating supporting analog units into the troop digital network.

Chapter 4

Security

CONTENTS

Fundamentals 4-3
Orient on the Main Body 4-3
Perform Continuous Reconnaissance 4-3
Provide Early and Accurate Warning 4-4
Provide Reaction Time and Maneuver Space 4-4
Maintain Threat Contact 4-4
Security Planning 4-5
Commander's Guidance 4-5
Troop Planning Considerations 4-6
Screen 4-10
Key Tasks 4-11
Stationary Screen 4-11
Example of Stationary Screen 4-13
Moving Screen 4-18
Area Security 4-30
Area Security Techniques 4-33
HVT Asset Security Considerations 4-33
Convoy Security 4-34
Critical Tasks 4-35
Convoy Security Elements 4-35
Convoy Security Techniques 4-36

Security operations, as defined in FM 3-90 [FM 100-40], are those operations undertaken by a commander to provide early and accurate warning of threat operations, to provide the force being protected with time and maneuver space within which to react to the threat, and to develop the situation to allow the commander to effectively use the protected force.

For the reconnaissance troop, security operations are characterized by conducting reconnaissance to reduce terrain and threat unknowns, gaining and maintaining contact with the threat to ensure continuous information, and providing early and accurate reporting of information to the protected force.

Security is an essential part of all offensive and defensive operations. Security operations may be considered in terms of the degree of security provided and the amount of combat power required. Reconnaissance troops normally screen, providing security for the commander along an exposed front, flank, or rear of the main body where a threat may exist. In noncontiguous operations, the troop may provide 360-degree security orientation. The troop may also conduct area and convoy security for high-value assets (HVA).

The purpose of this chapter is to—

- Define security fundamentals.
- Describe screens.
- Describe area and convoy security.

The three primary troop missions for security operations are—

- Screen.
- Area security.
- Convoy security.

Reconnaissance and counterreconnaissance are inherent and continuous in all security operations. The focus is on providing information to the protected force commander, denying the threat any information about friendly operations, and destroying or repelling threat reconnaissance elements throughout the depth of the AO.

Keeping the protected force informed of the situation provides the majority of the security to the brigade. UAVs and ground scouts/sensors are coordinated to synchronize their complementary capabilities. Exchange of orders, intelligence reports, and graphics using FBCB2 is efficient in keeping all forces synchronized; however, over extended distances or when communication links are tenuous, liaison officers may be required.

Counterreconnaissance is not a mission, but a task or purpose within a security mission. It is the sum of actions taken at all echelons to counter threat reconnaissance efforts and deny threat information through the depth of the AO. It is both active and passive to include combat action to destroy or repel threat reconnaissance elements. Counterreconnaissance requires a reconnaissance effort—the "looker"—and a combat effort—the "killer." The troop enables counterreconnaissance by locating and directing or coordinating its destruction by fires or combat elements. The troop suppresses threat reconnaissance elements with indirect fire and guides combat forces to destroy the threat. The troop requires combat element augmentation when tasked to engage in direct fire combat for counterreconnaissance as part of its security mission.

The width and depth of an AO that the troop can effectively cover depends on METT-TC.

- The number of avenues of approach, infiltration lanes, or NAIs that must be covered simultaneously.
- The requirements for long versus short duration observation posts (OP).
- Additional assets assigned to the troop, such as COLTs, GSR teams, and IREMBASS, or other remote sensors.

As METT-TC dictates an extended screen beyond doctrinal frontages, the troop's ability to accomplish its key tasks, or its ability to screen in depth, diminishes as the frontage increases.

SECTION I - FUNDAMENTALS

4-1. The troop performs security missions to provide information about the threat and terrain, to prevent the main body from being surprised, and to preserve the combat power of friendly forces for decisive employment. Critical information includes the size, composition, location, direction, and rate of movement of the threat. Terrain information focuses on obstacles, avenues of approach, and key terrain features that impact the maneuver of either force. The intent is to provide information that gives the BCT commander the reaction time and maneuver space necessary to effectively fight the threat.

4-2. Successful security operations are planned and performed maintaining these five fundamentals:

- Orient on the main body.
- Perform continuous reconnaissance.
- Provide early and accurate warning.
- Provide reaction time and maneuver space.
- Maintain threat contact.

ORIENT ON THE MAIN BODY

4-3. During security operations, the troop may operate in a large AO. This will require the troop to focus on the brigade commander's information requirements provided through the use of the commander's reconnaissance guidance that supports the BCT with continuous situational understanding. The troop operates at a specified distance or area that provides the maximum standoff distance and early warning to the protected force, but is within supporting distance. If the protected force moves, the troop also moves or shifts its orientation. The troop commander must know how the protected force commander intends to maneuver his forces and where he wants the troop in relation to his movement. The troop commander maneuvers his troop to positions that provide the observation and orientation necessary for security.

PERFORM CONTINUOUS RECONNAISSANCE

4-4. Information enhances security, and it is also an element of combat power. Security comes in large part from knowing as much as possible about the threat and terrain within the assigned AO. ISR operations are inherent in all security operations and must integrate the concepts of cueing, mixing, integration, redundancy, and depth to provide the protected force commander the maximum information possible and reaction time and space. The troop uses doctrinal reconnaissance

methods, tactics, techniques, and procedures to obtain this information during security operations. If the security mission involves movement, reconnaissance is necessary for both the higher headquarters or protected force. The troop's higher headquarters synchronizes air and ground operations to exploit the longer-range observation capabilities of the UAV, and accesses additional intelligence through reachback capabilities of the ABCS to gain the greatest flexibility and extended depth. The purpose is to determine what the terrain will allow the BCT and the threat to do, and identify all threat forces that will influence operations.

PROVIDE EARLY AND ACCURATE WARNING

4-5. Early and accurate warning of threat activity is the cornerstone of security operations. Early warning of threat activity provides the protected force commander the time and information needed to retain the tactical initiative and to choose the time and place to concentrate against the threat. ISR assets outside of the BCT cue the BCT or squadron to reposition assets to make contact with threat forces as soon as possible. UAVs, working in tandem with ground sensor units, allow the BCT to initially develop the situation with threat forces without endangerment of ground forces. This enables the troop to make contact under the most favorable conditions. The troop commander should employ remote sensors on the ground to monitor avenues of approach that cannot be easily observed. The troop employs scouts in positions that afford long-range observation of expected threat avenues of approach, and uses GSR to enhance their ability to see. Cueing, mixing, flexibility, depth, and redundancy must be built into the ISR plan.

PROVIDE REACTION TIME AND MANEUVER SPACE

4-6. All security operations are designed to provide reaction time and maneuver space to the protected force to enable it to attack the threat early and in depth with precision fires from artillery and aviation while maneuvering to decisively apply combat power. The security force operates as far from the protected force as possible, consistent with the factors of METT-TC. This distance provides the reaction time and maneuver space required by the protected force commander. Digital technologies and communications enhance timely and accurate reporting of threat activity, and natural or man-made obstacles in near-real time, providing the situational awareness needed to facilitate the BCT's maneuver. The troop operates within the BCT's battlespace, maximizing the BCT's increased long-range target acquisition capabilities. The troop uses BCT ISR assets to assist in cueing subordinate elements on threat activity and allows the commander to reorient or retask platoons and maximize cover and concealment.

MAINTAIN THREAT CONTACT

4-7. Unless otherwise directed, contact is not broken once it is gained. Contact does not have to be maintained by the individual scout or sensor that first makes it. The concepts of cueing, mixing, integration, and redundancy support maintaining contact. FBCB2 assists the commander in tracking changes to threat composition and disposition, support by

voice SPOTREPs and updates. Continuous information on the threat's activities must be gathered and disseminated higher, lower, and laterally. Maintaining contact requires—

- Continuous contact (mixing and redundant capabilities are planned and executed).
- Direct and indirect fires planning and support.
- Freedom to maneuver.
- Depth.

4-8. In support of defensive operations the troop may use a security drill to maintain threat contact throughout the depth of its AO. During support of offensive operations, the troop may conduct reconnaissance handover to pass the contact to another brigade, squadron, or maneuver battalion element.

SECTION II - SECURITY PLANNING

COMMANDER'S GUIDANCE

COMMANDER'S SECURITY GUIDANCE

Security Missions

- **Destruction Criteria (if any):**
  - What must the troop/platoons destroy in counterreconnaissance fight?
- **Displacement Criteria:**
  - What conditions cause displacement to alternate screen lines?
  - What conditions cause displacement in contact vs. out of contact?
  - What are the criteria for reconnaissance handover between the troop and the protected force?

4-9. Critical to the troop commander's ability to execute his mission is to clearly understand the destruction and displacement criteria for the security mission. This is in addition to the reconnaissance guidance of focus, tempo, and engagement criteria that is provided if required for the mission. The threat situation is often vague when planning a security mission. The troop should develop plans that are flexible enough to react to all feasible threat COAs. The completed plan should include a detailed description of how contact with the threat is gained and maintained, and how and where it is destroyed or handed over to other ISR elements or the protected force. The plan should explain what threat contact is connected to the higher commander's information requirements. The plan should address target acquisition and execution of BCT fires as necessary. Because of the need for depth, redundancy, integration, and flexibility, security operations often have the following characteristics or phases.

4-10. Security operations at troop level usually occur in four phases:

- Movement to an initial security position (occupation of a screen).
- Reconnaissance and counterreconnaissance.

- Gaining and maintaining contact with threat forces and either destroying or displacing in accordance with the commander's guidance (conduct handover to combat forces or conduct a security drill).
- Transition (conduct a passage of lines or initiate a new mission in support of higher's decisive operation).

4-11. Command guidance should address each phase of the operation and cover at least the following:

- Location/orientation/width of the screen in relation to the protected force.
- Depth of troop AO.
- Graphic control measures (include ISR [NAIs, UAV restricted overflight zone (ROZ)/air corridors, GSR/PROPHET location], fire support, and combat service support [CSS]).
- Duration of the screen.
- Method of movement to and occupation of the screen.
- Location and disposition of the friendly force being screened.
- Positioning, orientation, and/or integration guidance for nonorganic assets operating within the troop AO or in support of the troop as applicable. (COLTs or other target acquisition assets, GSR, PROPHET, UAVs, retrans, task force scouts).
- Engagement/destruction criteria.
- Displacement/disengagement criteria.
- Fratricide avoidance measures.
- C2 procedures, to include positioning and sequencing of signal nodes or retrans.
- Follow-on mission.

TROOP PLANNING CONSIDERATIONS

TIME SCREEN MUST BE ESTABLISHED

4-12. The time the screen must be set and established will influence the troop's method of deploying to and occupying the screen.

MOVEMENT TO SCREEN

4-13. The troop may use various methods to move to its initial screen based on the factors of METT-TC, the operations tempo, and the degree of security required. The three common methods are zone reconnaissance, infiltration, or tactical road march.

TRACE AND ORIENTATION OF SCREEN

4-14. The initial screen is depicted as a phase line and often represents the forward line of own troops (FLOT). As such, the screen may be a restrictive control measure for movement (LOA); coordination/permission would be necessary to move beyond the line to establish OPs or perform

reconnaissance. When occupied, OPs are established on or behind the phase line. OPs are given specific orientation and observation guidance.

INITIAL OP LOCATIONS

4-15. The squadron/brigade or troop commander may determine tentative initial OP locations to ensure effective coverage of the area and designated NAIs. As a minimum, the troop commander designates a primary orientation of observation for the scouts during the conduct of the screen. Scouts, once established on the screen, will report their location to the troop CP and verify they are in compliance with the commander's orientation and surveillance guidance. The scouts who occupy each OP always retain the responsibility to modify the location to achieve the commander's intent and guidance for surveillance.

4-16. OPs may be either mounted or dismounted. Mounted OPs maximize use of vehicular optics, weapon systems, and speed of displacement, but are more readily detected by the threat. Dismounted OPs provide maximum stealth at the expense of speed of displacement and vehicle-mounted optics and weapons. Dismounted and mounted OPs may be used together to provide depth and mutual security.

WIDTH AND DEPTH OF THE SCREENED AO

4-17. The troop sector is defined by lateral boundaries extending out to an LOA (the initial screen), forward of a rear boundary. The troop AO is established by its higher headquarters. The troop boundaries may be a squadron/brigade phase line and may serve as a reconnaissance handover line to control passing of responsibility for the threat to another force. The term *screen* is descriptive only of the forward trace along which security is provided. The troop's ability to gain depth decreases as screened frontage increases. Depth allows a threat contact to be passed from one element to another without requiring displacement. Depth is advantageous in the following situations:

- Destroying or repelling a threat reconnaissance patrol without compromising critical OPs.
- Preventing a threat force from penetrating the screen undetected.
- Minimizing gaps when OPs displace or are lost.
- Preventing threat templating of the screen.

4-18. Depth is achieved primarily by positioning OPs (mounted and dismounted) along templated avenues of approach (mounted and dismounted) and focused on points or NAIs along those avenues of approach. Additionally, cueing by other assets outside the troop AO adds depth, and integration of GSR/IREMBASS, PROPHET, and UAVs into the screen creates a mix of sensors and redundancy of observation and surveillance on key NAIs or avenues of approach. Attached or assigned combat elements (antitank sections, tanks, mechanized infantry, infantry), positioned behind and in support of the OPs, establish local security and provide surveillance.

LOCATIONS OF SUBSEQUENT SCREENS

4-19. The troop commander uses additional phase lines, checkpoints, or platoon boundaries to control the operation. These graphics serve as a tool to reorient subordinates, reposition subordinates, or conduct displacement to subsequent screens. Displacement to subsequent screens is event-driven. The troop commander may also use TIRS or checkpoints to control the troop's maneuver.

RECONNAISSANCE PLATOON AREA OF OPERATIONS

4-20. The troop commander assigns clear responsibility of identified avenues of approach and designated NAIs. The observation of an NAI must be tied to a PIR or a target acquisition task. The nature of a screen normally requires platoons to deploy abreast or in depth.

AT/MGS/TANK SECTIONS/INFANTRY PLATOONS

4-21. The troop commander or subordinate platoon leader positions combat assets in depth supporting the forward OPs oriented on EAs along templated avenues of approach. They are the primary direct-fire killing assets. The troop commander establishes tentative BPs, EAs, engagement criteria, and target handover procedures that support the troop's counterreconnaissance and security tasks. The supporting combat assets must reconnoiter their BPs, develop the BP and EAs (and alternate and subsequent BPs and EAs) and conduct coordination and rehearsals with the OPs they are supporting. These assets must be flexible and adaptive in developing their positions. Critical is the tie between observer and shooter. Commanders must ensure the communication and target handover plan is synchronized and that all observers and combat assets maintain situational awareness through FBCB2 or repetitive FM friendly forces updates to negate fratricide incidents.

FORCE TO BE SCREENED

4-22. The troop must orient on the force it is securing. If the main body is moving, the troop may move to maintain the screen's position relative to the main body. The troop commander must understand the protected force's scheme of maneuver in order to maintain the proper security posture and anticipate the troop's reaction to friendly and threat actions.

ATTACHMENTS

4-23. GSR and engineers are common attachments at troop level.

- **GSR/IREMBASS.** Sensors are used during screen operations to augment reconnaissance OPs and to add depth to the screen. They should be attached to platoons for security but given their focus, orientation, specific instructions and tasks by the commander. The commander ensures that the GSR/IREMBASS elements are integrated into the troop's security plan, the displacement plan (security drill), and into the troop's CSS plan.
- **Engineers.** If engineers are attached to the troop, the troop commander will assign them a priority of mission and priority of effort IAW higher's guidance or specified tasks that support the troop's scheme of maneuver. During screen operations,

engineers will normally conduct countermobility operations to support the commander's security plan by using turning obstacles to canalize avenues of approach, fixing obstacles in support of target acquisition and fire support tasks, and blocking obstacles to deny the threat a specific avenue of approach. The commander ensures that the engineer elements are integrated into the troop's security plan, the displacement plan (security drill), and into the troop's CSS plan as necessary.

- **UAVs.** UAVs can provide depth to the troop screen. They can be the first BCT asset to make visual contact forward of the troop and maintain contact with elements attempting to penetrate the screen. If the troop is extended over a large distance, UAVs can assist in identifying gaps in the reconnaissance platoon's surveillance. UAVs may also assist the troop in displacing. While the tactical UAV maintains contact with the approaching threat main elements, the reconnaissance troop may execute its security drill, reducing the risk of scouts becoming decisively engaged as they attempt to maintain contact as they displace.

INDIRECT FIRE PLANNING

4-24. Fire planning integrates artillery, and mortar fires, if available. The troop commander or FIST positions the troop mortars to fire up to two -thirds of their maximum range, but no less than one-third of the range forward of the FLOT. A wide AO may require the troop commander to position them to provide effective coverage of the most likely avenue of approach. The troop commander or FIST plans artillery fires to adequately cover any gaps in mortar coverage. Position COLTs, if attached, or other laser designators along the avenues of approach that best support the BCT's essential fire support tasks (EFST). Leaders at all levels must ensure that each assigned target has a purpose, a location, an observer, a trigger, and a communication plan, and that it is rehearsed.

DIRECT FIRE PLANNING

4-25. Based on his analysis of the terrain and the threat, the troop commander determines where to engage the threat (EAs). He also determines the location of BPs that provide observation, fields of fire, and cover and concealment that support each EA. See Chapter 5 for more information on direct fire planning and control.

POSITIONING OF C2, CS, AND CSS ASSETS

4-26. The troop commander positions himself to best command and control the maneuver of the troop and the conduct of the security mission. The troop CP occupies a position to provide continuous control and reporting during initial movements and during occupation of a screen. The key is to maintain communication with higher and with subordinates. The 1SG and the medics are positioned behind masking terrain close enough for rapid response. They are best sited along routes providing good mobility laterally and in depth.

PATROL REQUIREMENTS

4-27. Patrols are required to cover identified gaps between OPs. The troop commander tasks the platoon leaders to perform specific patrols

based on threat capabilities and assets available. Platoons report any information on executed patrols with a patrol report.

FBCB2 FILTER SETTINGS

4-28. Achieving an operational picture begins at the platform level as users set up their FBCB2 filters. There are filters that apply to the user's own system and those that apply to how the user sees other friendly platforms. There are also red filters that depict how red icons will be viewed. Filters allow the user to set the icons, overlays, labels, and geo-referenced graphics that are displayed as part of the overall SA picture. Filter settings are driven by METT-TC. The brigade S3 or tactical standing operating procedure (TAC SOP) should dictate SA filter settings to all units under operational control, attached, or assigned to achieve a common operational picture.

SECTION III - SCREEN

4-29. Screen is defensive in nature but not passive in execution. It is an active operation and the most common security mission assigned to the reconnaissance troop. Troops conduct screen missions to—

- Provide early warning of threat approach.
- Provide real-time information, reaction time, and maneuver space to the protected force.
- Destroy or repel threat reconnaissance elements within their capability.
- Impede and harass the threat.

4-30. The screen has the minimum combat power necessary to provide the desired early warning, but provides the least amount of protection of any security mission. It does not have the combat power to develop the situation. It is employed to cover gaps between forces, exposed flanks, or the rear of stationary or moving forces. The troop normally conducts a screen when the BCT commander wants to ensure time to respond to an unexpected threat action and cannot afford to commit other forces to the task.

4-31. Reconnaissance troops screen the front, flanks, and rear of a stationary force, but only to the flanks or rear of a moving force. Screening operations are not performed forward of a moving force. In noncontiguous brigade operations, the troop may be screening in depth within the brigade's battlespace.

KEY TASKS

4-32. To achieve the intent of a screen mission, the troop must accomplish the following key tasks:

- Allow no threat ground element to pass through the screen undetected and unreported.
- Maintain continuous surveillance of all avenues of approach larger than a designated size into the AO under all visibility conditions.
- Gain and maintain contact with threat forces and report any activity within the AO.
- Maintain contact with the protected force and any security forces operating on its flanks.
- Destroy or repel threat reconnaissance patrols (counterreconnaissance) within its capabilities and in accordance with its engagement and destruction criteria.
- Impede or disrupt the threat within its capabilities and in accordance with its engagement and destruction criteria.
- Do not become decisively engaged.

STATIONARY SCREEN

4-33. The troop can conduct a stationary screen for a stationary or moving protected force. In order to plan for and perform all the key tasks of a screen, the protected force commander may provide the troop with the information below.

AUGMENTATION

4-34. Augmentation is any additional assets the troop receives to conduct the mission. Augmentation from the BCT can include an antiarmor, MGS, infantry, or tank platoon; an engineer platoon; a sniper squad(s); GSR or IREMBASS teams; and air defense or logistical elements.

THE GENERAL TRACE OF THE SCREEN AND THE TIME THE SCREEN MUST BE ESTABLISHED

4-35. A PL placed along identifiable terrain graphically indicates the trace. Consideration should be given to the amount of early warning, range of indirect fires, desired protected force maneuver space, and fields of observation. When screening forward of the BCT, this PL represents the FLOT and may be along or close to a coordinated fire line. Placing screening forces beyond the trace line requires approval of higher headquarters, and will usually require modification of fire support coordination measures (FSCM).

THE WIDTH OF THE SCREENED AO

4-36. The troop may be assigned a wide frontage in excess of its doctrinal capabilities. If the troop is required to screen beyond the capacity it can handle, the commander requests additional assets to accomplish the tasks assigned. Careful consideration must be given when assigning ground-based sensors their own terrain, since the ability to execute the mission can be impacted by weather, station time, and

terrain. Ground-based sensors should be used to complement ground forces and to provide extended depth, some width, and increased flexibility to the operation.

THE FORCE TO BE SCREENED

4-37. The troop must understand the mission, purpose, and commander's intent of the unit it is screening. Knowing this information allows the troop commander to better focus the platoons and enhances initiative during execution.

THE REAR BOUNDARY OF THE SCREENING FORCE

4-38. The rear limit of the troop is depicted as a boundary. Responsibility for the area between the protected force and the troop rear boundary lies with the protected force. This boundary reflects time and space requirements, clearly delineates terrain responsibilities, and provides depth required by the troop. The boundary may also serve as a reconnaissance handover line to control passing responsibility for the threat to the protected force.

COUNTERRECONNAISSANCE AND ENGAGEMENT CRITERIA

4-39. The higher headquarters IPB should focus on identifying the type, quantity, and avenues of approach for threat reconnaissance and security forces. A thorough understanding of the composition of threat reconnaissance elements enables the troop to accurately determine likely reconnaissance avenues of approach and how best to acquire them. This drives the task organization and positioning of forces. If possible, the troop commander or XO should work with the staff during terrain analysis to identify these avenues of approach. The higher commander's guidance must specifically define the troop's engagement and destruction criteria for counterreconnaissance.

MOVEMENT TO OCCUPY THE SCREEN

4-40. Time and threat situation determine the method of occupying the screen. There are primarily three methods available to occupy the screen:

- **Zone reconnaissance.** If the situation is vague or more information is required on the terrain between the protected force and the screen line and time is available, the troop conducts a zone reconnaissance to the screen. This method identifies any threat in the sector and familiarizes the troop with the terrain. It is time-consuming, but provides the most security.
- **Infiltration.** If the threat situation is vague, or the threat is known to be in sector, and the intent is not to make contact with the threat prior to occupying the screen, the troop should infiltrate to get to the screen. Infiltration provides the optimum level of stealth, but is also time-consuming and less secure for the troop due to the reduction of flexibility in massing combat power.
- **Tactical road march.** If there is an accurate picture of the threat situation or time is short, the troop may conduct a tactical road march to a release point behind the templated screen and deploy from there to the screen.

CONTROL OF DISPLACEMENT TO SUBSEQUENT POSITIONS

4-41. The higher headquarters uses PLs and other control measures to control the operation and orient the screen. Since displacement to subsequent positions is event-driven, PLs serve to guide the troop commander's planning and orientation for displacement to subsequent screen lines during the execution of the screen mission. The higher headquarters should define the event criteria triggering displacement.

POSSIBLE FOLLOW-ON MISSIONS

4-42. To facilitate planning and future operations, the troop's next likely mission should be defined with enough information to allow the commander to begin planning and preparing for it. Providing this information also helps define the end state of the screen mission.

EXAMPLE OF STATIONARY SCREEN

4-43. Events described in the example stationary screen are depicted in Figure 4-1.

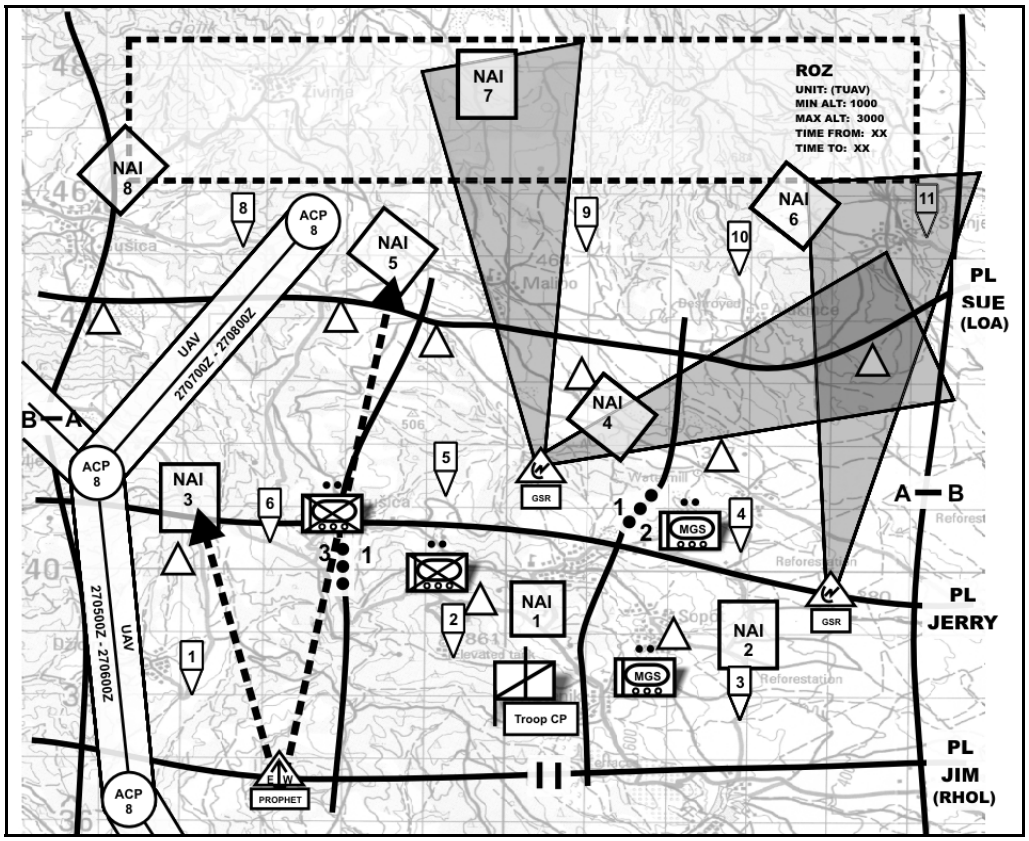


Figure 4-1. Reconnaissance Troop Stationary Screen

4-44. When the troop receives a security mission, its AO is usually identified by lateral boundaries with an FLOT or LOA (PL SUE) and a rear boundary (PL JIM) specified. The threat boundary may also be designated the reconnaissance handover line. The higher headquarters

may include A2C2 measures to facilitate aerial reconnaissance within and/or beyond the troop's AO.

4-45. Based on higher headquarters or protected force guidance, the troop commander develops his plan during troop-leading procedures, considering the following:

- Friendly force considerations, to include—
  - Protected force's mission, commander's intent, and CCIR.
  - Mission of adjacent forces.
  - Higher commander's reconnaissance focus, tempo, engagement criteria, and security destruction and displacement criteria.
  - Missions of ISR elements, such as a PROPHET or IREMBASS, operating within the troop AO or in support of the troop, but not under troop control.
  - Capabilities and limitation of ISR elements, such as a GSR, that have been attached to or controlled by the troop.
- Terrain and weather considerations, to include—
  - Effects on effective ranges of weapons systems, laser designators, and NODs.
  - Effects on UAVs and other aviation assets for reconnaissance, transport, resupply, casualty evacuation, or fire support.
  - Effects on cross-country mobility.
- The threat situation, to include—
  - Type and capabilities of likely threat weapons systems and NODs.
  - Special equipment, such as ground sensor systems, signal intercept, and surveillance radar may be addressed.
  - Higher headquarters threat COAs, to include a SITEMP depicting composition, dispositions, and likely axis of advance.
    - Identify reconnaissance composition and purpose, and the objective of threat reconnaissance efforts.
    - Identify threat reconnaissance COAs and avenues of approach, to include mounted and dismounted infiltration routes.
    - Identify possible air insertion landing zones.
- Civilian considerations that may impact on the mission such as—
  - Compositions and dispositions of military, paramilitary, and law enforcement organizations.
  - Locations of police stations, armories or barracks, encampments, weapons holding areas, and staging areas.

- If applicable, description and capabilities of uniforms, insignia, vehicles, markings, and equipment, to include weapons and NODs.
- Locations of communications networks and media outlets.

4-46. The commander develops his intent that addresses the following:

- Key security and reconnaissance tasks that must be accomplished during the screen.
- Purpose for screen in relation to the protected force's mission.
- End state for screen.

4-47. The commander develops a mission statement that includes the screen location, start time, duration, orientation, and follow-on mission and a concept of operation that describes, as a minimum:

- Movement to initial screen line.
  - If applicable, zone reconnaissance to answer the information requirements.
    - Focus and tempo for any reconnaissance, to include changes to tempo based on anticipated contact or other requirements.
    - Identify platoon and other subordinate element tasks, to include reconnaissance, security, and follow and support, as required.
    - Determine task organization and subordinate unit AOs based on reconnaissance tasks, security tasks, and METT-TC factors.
    - Integrate reconnaissance methods such as sensor, mounted, and dismounted reconnaissance and surveillance.
    - Determine deployment method and select movement techniques that support the tempo.
  - If applicable, infiltration to avoid threat forces and establish the screen.
  - If applicable, tactical road march to the screen line.
- Establishing the screen.
  - If necessary, determine changes to task organization and subordinate unit AOs after zone reconnaissance based on tasks and METT-TC factors.
  - Determine primary screen orientation for platoons and primary OPs, as necessary.
  - Identify method to gain contact with threat reconnaissance and other designated threat forces.
  - Identify engagement criteria for scouts and combat forces, as necessary.
  - Identify method of displacement while maintaining contact to subsequent screen lines.

- If applicable, identify initial locations for attached combat forces, such as SBCT rifle or a tank platoon, that provide flexible response against threat reconnaissance throughout the troop AO.
- If necessary, identify vehicle positions that allow utilization of onboard optics, such as LRAS3, to assist in observation and provide overwatch.
- If necessary, determine requirements for short- and long-duration surveillance of NAIs.
- If necessary, determine patrol requirements between or in support of OPs.

- Conduct reconnaissance that uses cueing, mixing, and redundancy to integrate troop and other assets into the security effort to gain and maintain contact throughout the depth of the AO.
  - OPs are positioned in depth and focused on NAIs.
  - UAVs reconnoiter avenues, routes, infiltration lanes, or key and restrictive terrain forward or to the flanks of the troop AO.
  - PROPHET monitors for specified communications traffic or transmissions within designated areas containing suspected threat or supporting forces.
  - GSR orients on NAIs located on avenues of approach or routes forward or to the flanks of the troop screen line.
  - Ground sensors, such as IREMBASS, are emplaced on flank avenues of approach or routes leading into the troop AO.
  - NBC reconnaissance teams reconnoiter templated attacks and bypasses.
- Destroy or repel threat reconnaissance in accordance with troop capabilities and engagement criteria.
  - Position reconnaissance elements—the "hunters"—as far forward as possible to gain contact with threat reconnaissance.
  - Position attached combat elements—the "killers"—for flexible response and destruction of threat reconnaissance without compromising the locations of OPs or ISR elements.
  - Array and position hunters and killers with flexibility to refine or adjust dispositions throughout the operation.
    - Coordinate and position elements to accept handover from higher ISR assets cues.
    - Mix troop elements and assets to provide depth and redundancy within the AO, using GSR and IREMBASS to make first contact, or on less likely or restricted reconnaissance avenues of approach.

- Position or coordinate combat elements to allow maximum response time and mobility to be guided to destroy the threat reconnaissance.

- Synchronization of target acquisition tasks with security and reconnaissance tasks.
  - Target description, location (known or templated), and method of engagement.
  - Desired target effect and purpose for effect.
  - Criteria to change from target surveillance to designation.
- Synchronize fires to suppress stationary elements or destroy high-value targets with precision-guided munitions.
  - Priorities of fire and use of fires to maintain maximum range forward of the reconnaissance platoons.
  - Incorporate hasty obstacles with restrictive terrain to halt reconnaissance elements and enable effective indirect engagement.
  - Link surveillance tasking to triggers.
  - Cover both mounted and dismounted avenues of approach.
- Locations and criteria for reconnaissance and target handover.
  - Accepting from or transferring to another element.
  - Conducting handover within the troop by subordinate elements.
- Graphic control measures that support the concept of the operation to include—
  - Boundaries identifying the troop's AO, line of departure, and initial and subsequent screen lines.
  - Designate start points, release points, and rally points for each route,
  - PLs, checkpoints, and contact points for coordination with other elements.
  - RHOLs, TIRS, or GIRS to assist C2.

4-48. Logistic operations are conducted to prevent the threat from detecting reconnaissance and combat element locations, to include—

- Priorities for service support.
  - Troop reconnaissance elements should be prepared to operate for as long as possible (24-72 hours) without resupply.
  - Combat forces may require refueling on a daily basis.
  - Forward movement of resupply vehicles is restricted.
  - Reconnaissance and combat elements are rotated to resupply points in the rear of the troop AO.

- Security requirements and techniques for combat trains or supporting elements.
- Movement and positioning of trains and logistical supply points.
- Resupply, to include emergency and caches.
  - Caches for Class I, III, IV, VIII, and other mission-specific items.
  - Drop points away from vehicle hide and OPs.
- Casualty consolidation and evacuation plan that addresses the location of all aid stations and methods for ground and air evacuation.
- Vehicle recovery, to include secured collection points and maintenance procedures.
- Equipment and supply destruction criteria.

4-49. Define and establish procedures for the communications architecture, to include reporting flow, and C2 responsibilities, to include—

- Positioning of commander, XO or CP, and retrans to maintain communications with the higher headquarters and other designated elements.
- Method and techniques for communication between mounted and dismounted elements.
- Establishing digital connectivity and communications with supporting assets.
  - Communication plan for target or reconnaissance handover.
  - FBCB2 friendly SA display to assist clearing fires.
  - Procedures to track analog elements, such as dismounts, to avoid fratricide.
  - Coordination with combat (killer) elements to operate on the same FM nets, unless they are operation control (OPCON) to the scout platoons they are operating behind.
  - Tailored message addressing groups to ensure proper message routing.
- Identify all BCT aid station internet protocol (IP) addresses to assist location and navigation to the nearest aid station.

MOVING SCREEN

4-50. Given the nature of US Army operations and the capabilities of the BCT, the majority of the operations undertaken will be offensive, usually operating over extended distances. The same planning considerations discussed above apply to a moving screen, with additional requirements to enable the troop to reorient OPs and/or screen lines with the movement of the protected force. The troop may be required to conduct moving flank or rear screens. The troop's maneuver is regulated by the requirement to maintain the time and distance factors desired by

the protected force commander. UAVs or sensors may assume the screen during the maneuver of reconnaissance platoons or sections, or work to extend the areas of coverage.

4-51. Screening the rear of a moving force is essentially the same as a stationary screen. As the protected force moves, the troop occupies a series of successive screens and the protected force moves forward.

4-52. The troop may conduct a moving flank screen by itself or as part of the squadron or BCT. The width of the screen AO is not as important as maintaining orientation on the force being protected and maintaining continuous observation of the threat avenues of approach that might affect the protected force's maneuver. Excluding the protected force's front and rear security forces, the troop screens from the front of the protected force's lead combat element to the rear of the protected elements.

4-53. There are three basic techniques for occupying a flank screen of a moving force. The technique, or combination of techniques, is determined by the threat situation and the knowledge available on the threat, the BCT commander's intent, and the speed that the protected force is moving.

4-54. In the first technique, the troop crosses the LD separately from the protected force and conducts a tactical road march within an AO parallel to the force. It then deploys from a release point to the initial screen positions and orientation. Scout platoons occupy OPs as they reach them. This is the fastest but least secure technique. If available, UAVs can reconnoiter forward of the troop or maintain contact with the protected force. Sensors can occupy OPs and provide long-range surveillance of threat avenues of approach. This technique is appropriate when the protected force is moving very quickly, the LD is not an LC, or earlier ISR indicates threat contact is not likely in the area through which the troop is moving.

4-55. In the second technique, the troop crosses the LD separately from the protected force and conducts a zone reconnaissance within an AO parallel to the force. Screen positions are occupied as they are reached. This technique is slower, but provides better security to the troop and the protected force. This technique is appropriate when the protected force is moving slower, the LD is not an LC, or earlier ISR indicates threat contact is possible in the troop AO.

4-56. In the third technique, the troop crosses the LD with the protected force and conducts a zone reconnaissance out to the screen. This technique provides the most security for the troop and the protected force, but requires more time. This technique is appropriate when the protected force is moving slowly, the LD is the LC, or the threat situation is vague or expected.

4-57. In all three techniques the troop must maintain contact with the protected force, reorient the screen in relation to the protected force's maneuver, and conduct reconnaissance and screen in two directions (forward of the troop and flank).

APPLYING COMMAND AND CONTROL MEASURES

4-58. The inherent dual orientation of a moving flank screen, direction of movement versus orientation of the screen, poses numerous challenges for control of the operation. Control measures must facilitate both orientations. The procedures below provide a method to applying graphic control measures to a moving flank screen (see Figure 4-2).

- Use PLs to control the reconnaissance platoon's movement (placed perpendicular to the screen), but do not divide avenues of approach. Plan to use these PLs as on-order boundaries for subordinate platoons if threat contact is gained. Place PLs no more than 2 to 3 kilometers apart (corresponding to the width of a reconnaissance platoon's screen frontage).
- Use additional PLs rearward of (parallel to) the initial screen to control retrograde movement (toward the protected force). Plan to use these PLs as subsequent (on-order) screens.
- If available, use mortar firing positions or checkpoints to control movement of the mortar section. Position these firing positions rearward of the screen where they allow the mortars to fire two-thirds maximum range forward or cover likely avenues of approach. Plan subsequent (on-order) mortar firing positions between the screen and the protected force.

4-59. While the number of graphic control measures and required planning may seem excessive, they provide maximum flexibility in terms of mission execution. The troop commander can issue simple FRAGOs to adjust the plan to the threat situation.

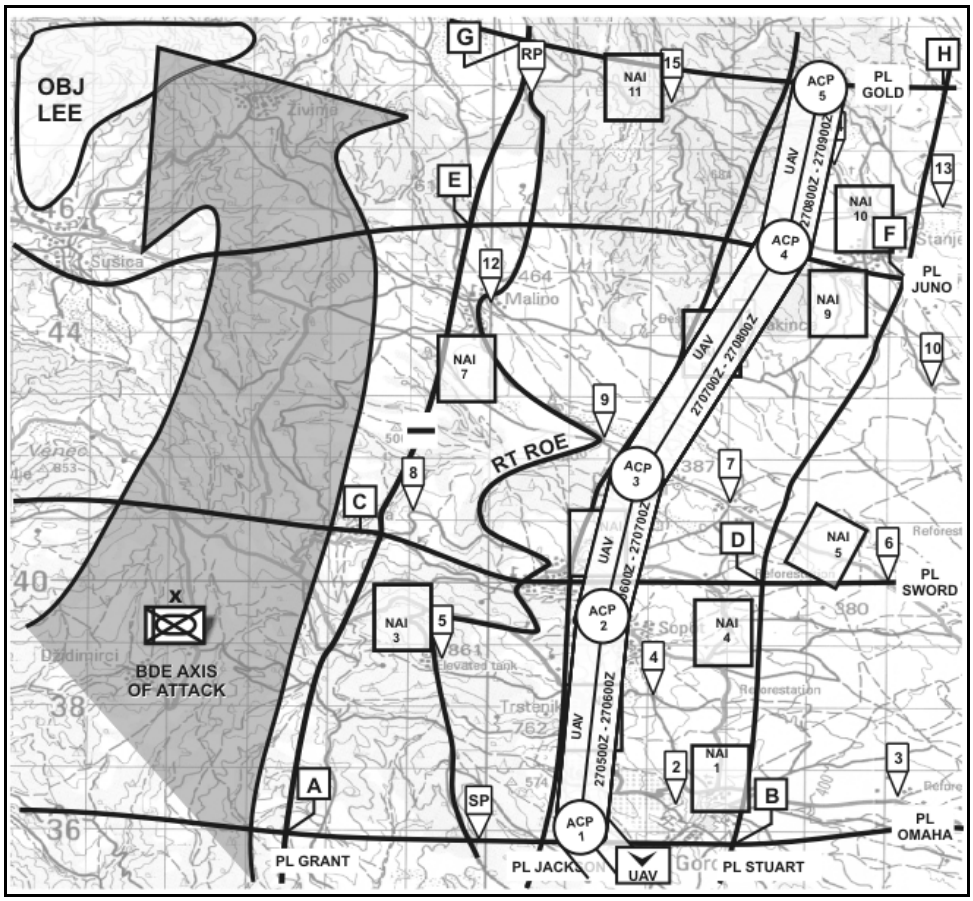


Figure 4-2. Troop Moving Flank Screen Graphics

REPOSITIONING THE SCREEN

4-60. The troop must reposition to stay oriented on the force it is securing. Movement along the screen is determined by the speed of the protected force. Movement is conducted by one of the following techniques (see also Figure 4-3):

- Continuous marching.
- Bounding by platoons (alternately or successively).
- Bounding by OPs (alternately or successively).

TECHNIQUE	CONSIDERATIONS	ADVANTAGES	DISADVANTAGES
Continuous Marching	Main body movement very fast. Perform as route recon. Contact not likely. Air screen active on flank.	Fast. Maintains unit integrity.	Least secure.
Alternate Bounds by Platoon	Main body movement is faster. Bound rear to front by platoons. Contact possible.	Fast. Good surveillance. Maintains unit integrity.	May leave temporary gaps.
Successive Bounds by Platoon	Main body movement is slow. Bound simultaneous or in succession by platoon or troop. Threat contact possible.	Most secure. Maintains maximum surveillance. Maintains unit integrity.	Slowest method. Less secure during simultaneous move. May leave temporary gaps.
Bounds by Observation Post (Alternate and Successive)	Main body movement is faster. Threat contact possible. Execute bounds from rear to front.	Very secure. Maintains maximum surveillance.	Slow. Disrupts unit integrity.

Figure 4-3. Screen Movement Techniques

CONTINUOUS MARCHING

4-61. This technique is appropriate when the protected force is moving quickly and contact is not likely. It is the least secure movement technique.

4-62. Reconnaissance platoons deploy in platoon column formation with their reconnaissance and security orientation to the flank. The remaining troop elements, organic or attached, deploy in depth between the screen line and the protected force. The trace of the screen is essentially the route of advance for the reconnaissance platoons in column. The remainder of the troop moves along a designated route or axis of advance (see Figure 4-4).

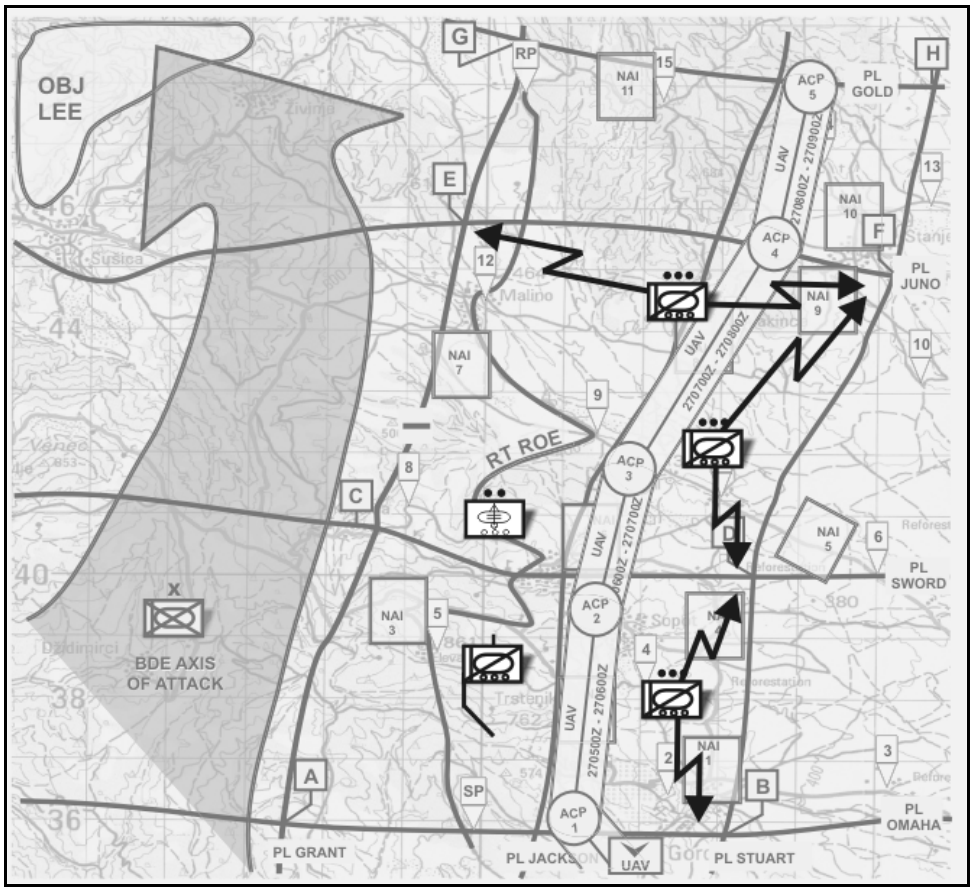


Figure 4-4. Troop Repositions the Screen by Continuous Marching

BOUNDING BY PLATOONS

4-63. This technique is appropriate when the protected force requires greater protection than afforded by continuous marching, is not moving quickly, or knows threat contact is possible. Bounds may be alternating or successive. Bounding platoons alternately may leave temporary gaps in the screen as they move. Bounding platoons successively is more secure but slower than bounding platoons alternately.

4-64. Platoons deploy into their AOs by alternately bounding around or to the rear of another (see Figure 4-5), or successively bounding around forward platoons along the screen (see Figure 4-6) to assume new positions along the screen. The remaining troop elements, organic or attached, move in depth between the screen line and the protected force to best support the reconnaissance platoons.

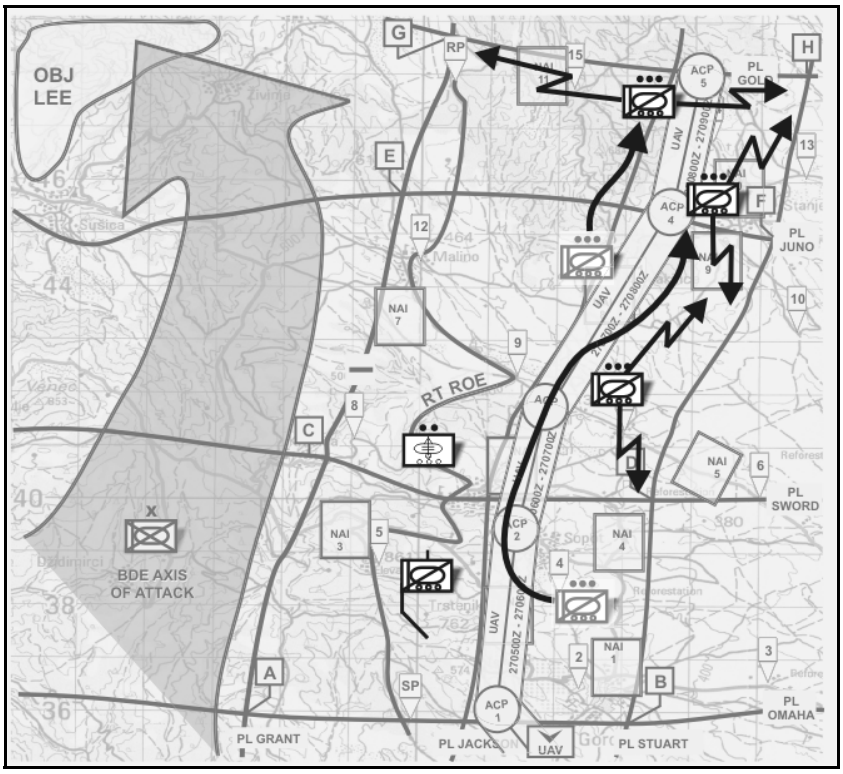


Figure 4-5. Troop Repositions the Screen by Alternately Bounding Platoons

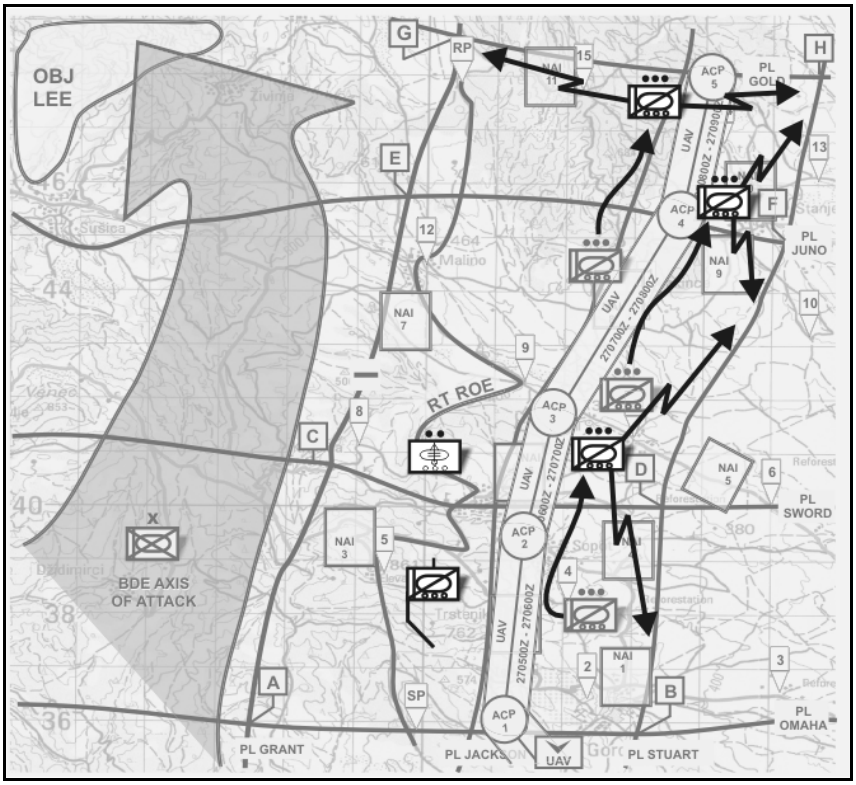


Figure 4-6. Troop Repositions the Screen by Successively Bounding Platoons

BOUNDING BY OBSERVATION POSTS

4-65. This technique is appropriate when the main body is moving slowly, contact is possible, and maximum security is required. Bounding OPs alternately will disrupt the integrity of the scout platoons as OPs bound to their next position. Bounding OPs successively is easier for the scout platoons to control.

4-66. The troop initially deploys the scout platoons abreast and alternately bound the rearmost OP around or to the rear of the forward OP to assume a new position along the screen line (see Figure 4-7). OPs may successively bound along the screen line (see Figure 4-8). The number of OPs on the screen line at any given time may be reduced as two or more may be bounding at any given time. The protected force's rate of advance determines this.

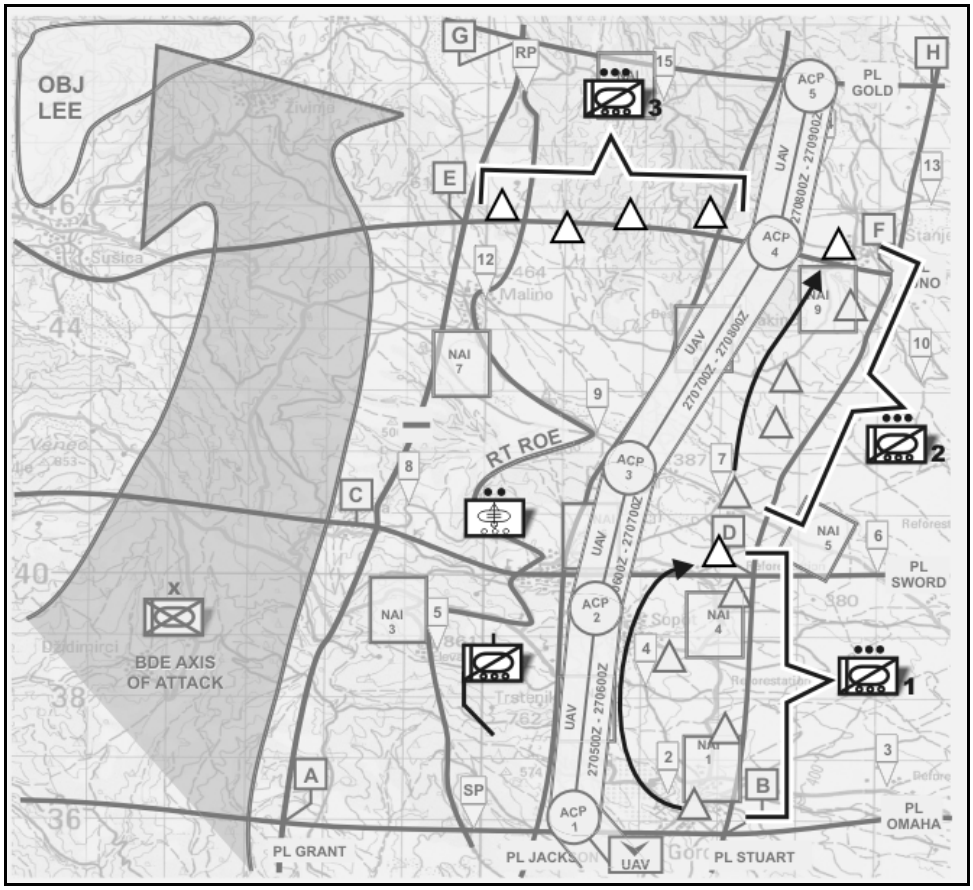


Figure 4-7. Troop Moves by Platoon Alternately Bounding Observation Posts

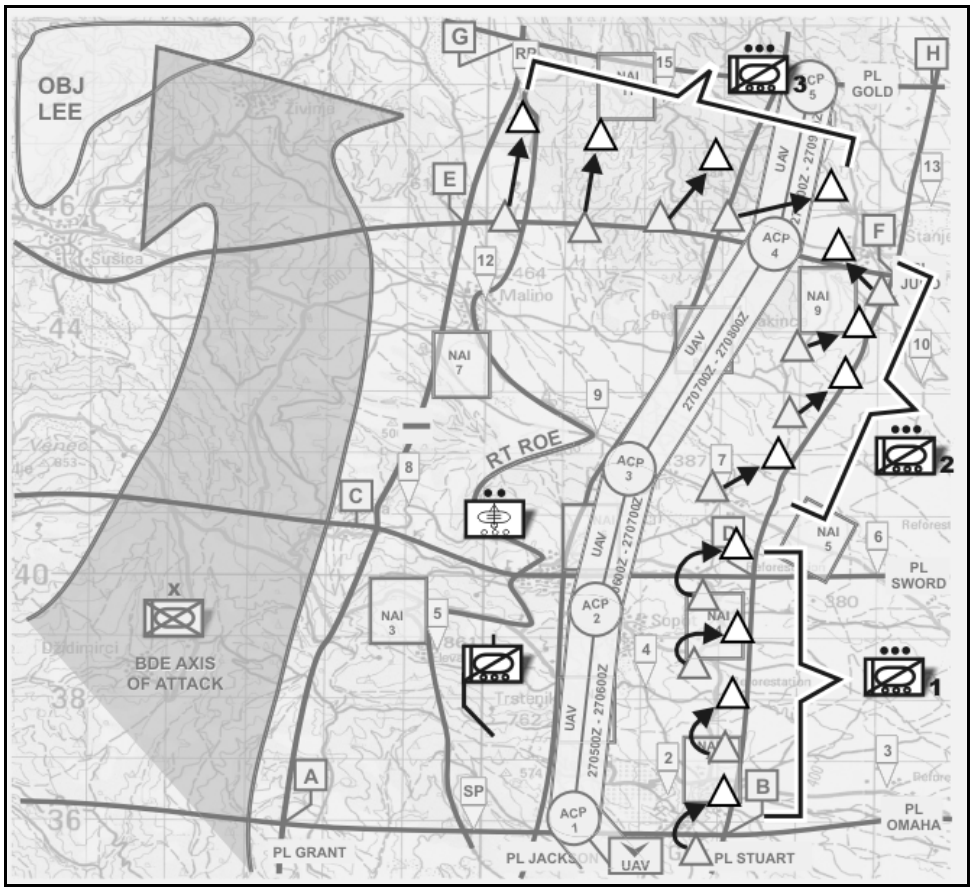


Figure 4-8. Troop Moves by Platoon Successively Bounding Observation Posts

SECURITY DRILL

4-67. A security drill is a series of rehearsed actions a platoon or troop takes to maintain contact with the advancing threat force throughout the depth of its AO in accordance with commander's guidance. It is used when displacing the screen to subsequent screen line or OP positions. The displacement criteria is established in the commander's guidance and OPORD and must be clearly understood at all echelons. The troop's conduct of security drills is tempered by the protected force commander's overall concept, intent, and scheme of maneuver. Threat actions, or events, drive security drill execution (see Figure 4-9 through Figure 4-11).

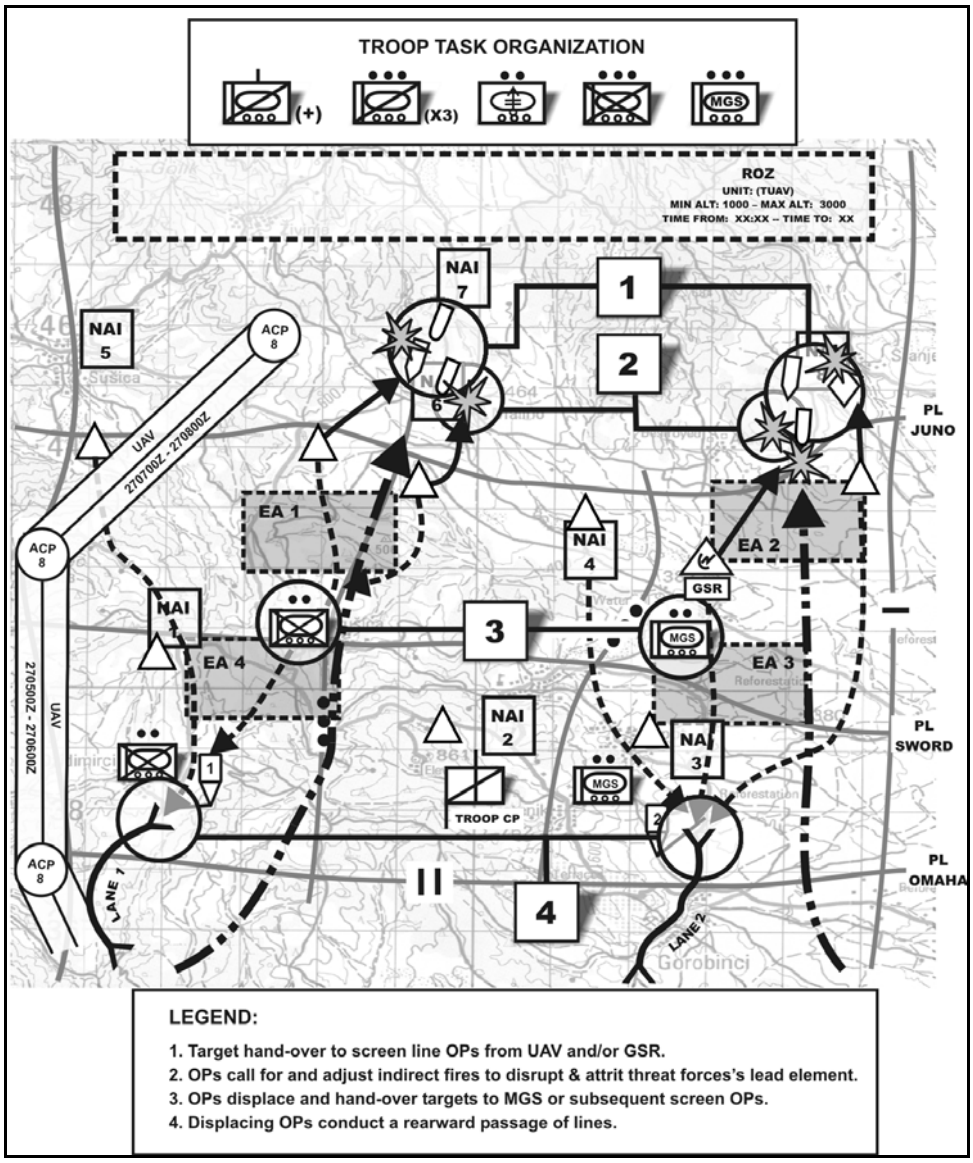


Figure 4-9. Reconnaissance Troop Security Drill

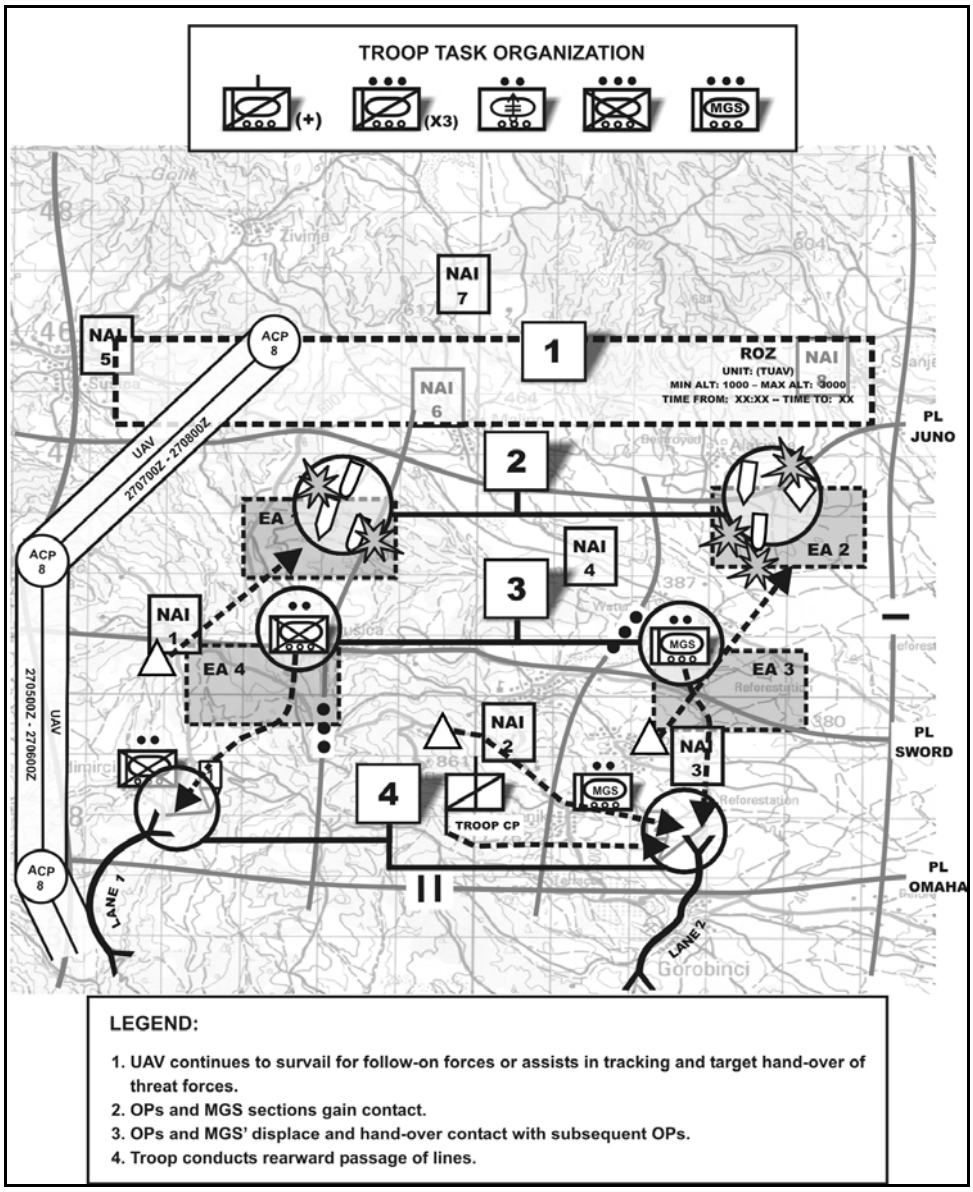


Figure 4-10. Reconnaissance Troop Security Drill

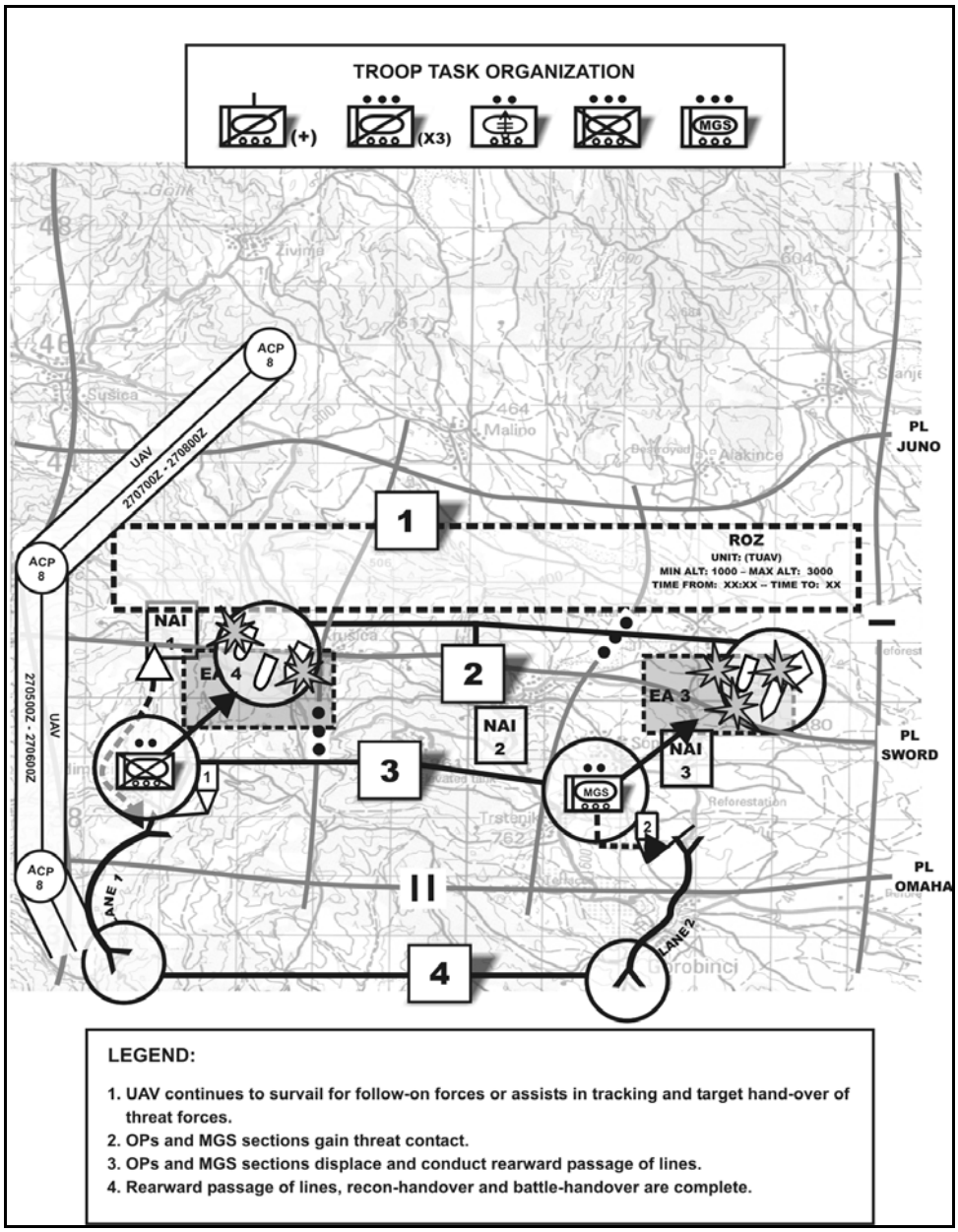


Figure 4-11. Reconnaissance Troop Security Drill

4-68. At troop level, the security drill combines the displacement of the initial screen with the actions of the combat elements such as antitank platoons, MGS platoons, tank platoons, or mechanized infantry platoons from the BCT. Combat platoons occupy BPs in advance of a security drill to support platoon or section displacement based on engagement and disengagement criteria in addition to METT-TC factors.

4-69. A detailed, rehearsed indirect fire plan must be established to assist in the displacement of the troop. If applicable, caches of mortar ammunition must be positioned at primary and subsequent mortar firing positions.

4-70. At platoon level, OPs gain contact with the threat main body, then report and prepare to displace to a subsequent position. When the threat force reaches the OP break point or trigger point (point where the OP must displace or his position/movement will compromise him to the threat), the OP passes off the responsibility to maintain contact to another OP in depth. The platoon displaces its OPs to subsequent positions in depth while maintaining contact with the threat. If attached or in support, UAVs and ground sensors enhance the ability of the troop to maintain contact without compromising the ground scouts.

4-71. Withdrawing to the main battle area should be planned and executed as a rearward passage of lines under threat contact. Too often, units underestimate the speed of a threat attack and withdraw too late. Critical execution aspects include ensuring all elements have updated digital overlays of obstacles and friendly forces; transmitting the troop's SA data to the forces they are passing through; coordinating recognition signals, passage points, and return routes and depicting them in a digital operations overlay; and planning indirect fires to cover the withdrawal. Withdrawing analog vehicles, or those whose FBCB2 is inoperative, should notify the controlling headquarters that they cannot send SA data and will not appear on FBCB2. Those vehicles should link up and move with a vehicle that is transmitting SA data to reduce the possibility of fratricide.

4-72. A security drill is one of the more difficult tasks the troop executes. Coordination, rehearsals, planned depth, cueing, mixing, and redundancy tied to engagement and displacement criteria are paramount for successful execution for displacement in and out of contact.

SECTION IV - AREA SECURITY

4-73. Units conduct area security missions primarily during stability operations and support operations to deny the threat the ability to influence friendly actions in a specific area, to deny the threat use of an area for its own purposes, or to protect an HVA. This may entail occupying and securing an area before the threat can, or taking actions to destroy threat forces already present. Area security involves a variety of techniques and may include reconnaissance, security, defensive, offensive, stability, and support tasks.

4-74. Area security is a form of security that includes reconnaissance and security of designated personnel, airfields, unit convoys, facilities, main supply routes, lines of communications, equipment, and critical points. The reconnaissance troop may conduct the following in support of area security:

- Area, route, or zone reconnaissance.
- Screen.
- Offense and defense tasks (within capability based on METT-TC).
- Convoy security.

- HVA security.

NOTE: The reconnaissance troop relies on the BCT to provide combat elements to perform offense and defense actions if the threat situation is not permissive.

4-75. The troop may conduct the following additional tasks in stability operations and support operations:

- Secure a base camp.
- Liaison.
- Conduct compliance inspections.
- Conduct presence operations.
- Support checkpoint operations.
- Provide humanitarian support.
- React to civil disturbance.

4-76. An area security force neutralizes or defeats threat operations in a specified area. It operates in an area delineated by the headquarters assigning the area security mission. It screens, reconnoiters, attacks, defends, and delays (within capability) as necessary to accomplish its mission. Area security operations may be offensive or defensive in nature and focus on the threat, the asset or element being protected, or a combination of the two. Commanders may balance the level of security measures with the type and level of threat posed in the specific area; however, all-around security is essential.

4-77. The factors of METT-TC determine specific unit missions. Factors such as—

- The natural defensive characteristics of the terrain.
- Existing roads and waterways for military lines of communication and civilian commerce.
- The control of land and water areas and avenues of approach surrounding the area to be secured extending to a range beyond that of threat artillery, rockets, and mortars.
- The control of airspace.
- The proximity to critical sites such as airfields, power generation plants, and civic buildings.

4-78. Due to the possibility of commanders tying their forces to fixed installations or sites, these types of security missions may become defensive in nature. This must be carefully balanced with the need for offensive action. Early warning of threat activity is paramount in the conduct of area security missions and provides the commander with time to react to any threat. Proper reconnaissance planning coupled with dismounted/mounted patrols the integration of ISR assets (UAVs, GSR/IREMBASS, PROPHET, HUMINT, IMINT, electronic intelligence [ELINT], Q36/37 radar, Sentinel radar) that allow for cueing, mixing, and depth for the security force.

4-79. A perimeter is established when a unit must secure an area where the defense is not tied into an adjacent unit. Perimeters vary in shape depending on METT-TC. If the commander determines the most

probable direction of threat attack, he may weight that part of the perimeter to cover that approach. The perimeter shape conforms to the terrain features that best use observation and fields of fire.

4-80. Perimeters are divided into platoon sectors with boundaries and contact points. Mutual support and coordination between defensive elements (usually combat elements within the brigade) require careful planning, positioning, and coordination due to the circular aspects of the perimeter. A screen line is established, integrating OPs, GSR, and patrols. Combat elements are placed overwatching chokepoints or high-speed avenues of approach. Likely threat drop zones, landing zones, or bases are identified and kept under observation. Air assets, if available, are integrated into the reconnaissance plan (see Figure 4-12).

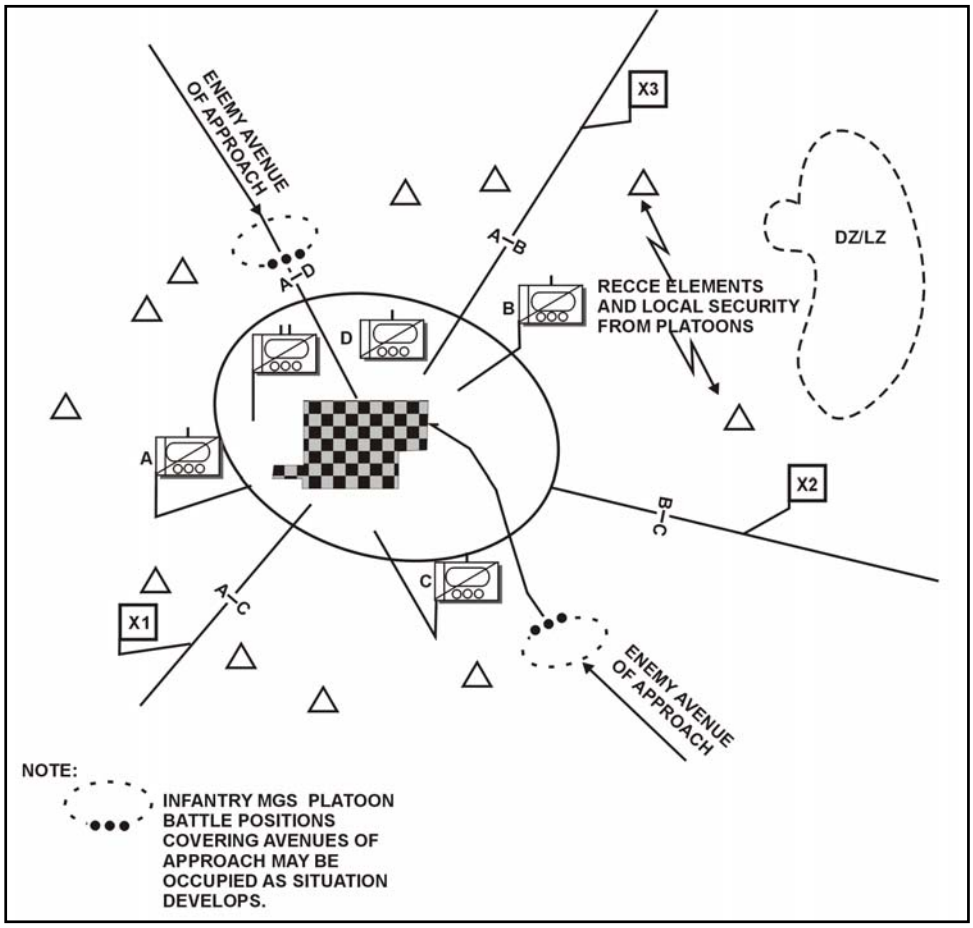


Figure 4-12. Area Security Operations for a Cavalry Squadron (RSTA)

AREA SECURITY TECHNIQUES

4-81. When deploying for area security, the troop establishes a perimeter around the point, area, or asset to be secured. Vehicle positions are adjusted to orient on likely threat avenues of approach. The headquarters element is positioned in the center of the perimeter to facilitate C2 and to ensure enhanced protection. Vehicle and dismounted positions are selected to provide effective protection and observation/fields of fire on mounted and dismounted avenues of approach. Direct and indirect fire planning and obstacle planning are initiated as survivability and fighting position preparation begins.

4-82. Platoons deploy into assigned AOs and establish local security. If necessary they clear their AO and establish or occupy OPs, checkpoints, and/or fighting positions oriented on NAIs, avenues of approach, routes, and/or infiltration lanes. The platoons search, safeguard, and evacuate EPWs and/or detained civilians to the troop collection point (normally the troop trains). They integrate crew-served and dismounted automatic weapons to create a fire plan and deploy antitank ambushes as necessary. OPs are deployed to observe likely avenues of approach, to provide early warning of threat activity, and to assist in controlling indirect fires.

4-83. The troop also employs patrols to enhance security. Reconnaissance patrols and combat patrols are employed to become familiar with the AOs, to gain information on threat forces, to liaison and gain information on the civilian populace and needs of society, and to destroy small threat dismounted reconnaissance elements.

4-84. If assigned, the mortar section occupies a fire point in the center of the perimeter. The section lays its mortars on the priority target established by the troop commander, but is prepared to shift fires 360 degrees. The section will continue to improve its position and plan and emplace ammunition caches as time allows.

4-85. The troop coordinates for and emplaces supporting ISR assets, such as GSR and IREMBASS. If available, it coordinates for UAV coverage of NAIs and along avenues of approach. These ISR assets are positioned to provide depth to the troop's security plan.

HIGH-VALUE ASSET SECURITY CONSIDERATIONS

4-86. New systems and communications equipment have resulted in a significant increase in the number of critical systems on the battlefield that have no defense or security capability. Commonly called HVAs, these may include artillery and air defense radars, multiple launch rocket system (MLRS) units, UAV launch and recovery sites, C2 nodes, and intelligence acquisition systems. The troop or some of its subordinate elements may be assigned a mission to provide security for HVAs, particularly when in a resupply or reorganization phase.

4-87. When assigned an HVA security mission, the commander must resolve the following issues—

- What are the IP address, FM frequency, location, and linkup point of the HVA and quick reaction force (QRF)?

- What is the mission and movement/positioning plan of the HVA?
- What is the threat? What are its capabilities?
- Can the HVA be easily detected and subjected to indirect fires? If so, the security force needs to consider its own survivability and maintain adequate standoff from the HVA.
- What is the expected duration of the security mission, and who will determine security force change of mission?
- What other forces are in the area that can assist if needed or need to be aware of the presence of the HVA and the security force? Consider other HVA security forces, military police, engineers, and logistics base clusters.
- Is there a QRF? If so, consider the following:
  - Current location and time required to reinforce.
  - Unit's capabilities.
  - Graphic control measures (including restrictive fire measures).
- Are there any triggers to leave the security mission to enter the close fight? Is there an implied reserve mission for the security force?
- What is the mission/movement plan for the parent unit of the security force? The security force needs to maintain SA on the parent force to facilitate linkup or to react to orders to join the close fight.
- Who will be the security force's higher headquarters (brigade, squadron, HVA headquarters)? What are its IP address, location, FM frequency, and movement plan?
- Who provides logistical security?

SECTION V - CONVOY SECURITY

4-88. Convoy security missions are conducted when insufficient friendly forces are available to continuously secure lines of communication in an AO. They may also be conducted in conjunction with route security missions. A convoy security force operates to the front, flanks, and rear of a convoy element moving along a designated route. Convoy security missions are offensive in nature and orient on the force being protected.

4-89. The troop must be augmented with a combat platoon in order to conduct convoy security missions independently under permissive METT-TC. The reconnaissance troop should also be reinforced with engineers to reduce obstacles along the route. The higher headquarters should coordinate additional ISR assets to support the security mission. UAVs or aerial reconnaissance should reconnoiter the route in advance of the troop's lead elements.

CRITICAL TASKS

4-90. A convoy security mission has certain critical tasks that guide planning and execution. To protect a convoy, the security force must accomplish the following critical tasks:

- Reconnoiter and determine the trafficability of the route the convoy will travel.
- Clear the route of obstacles or positions from which the threat could influence movement along the route.
- Provide early warning and prevent the threat from impeding, harassing, containing, seizing, or destroying the convoy.

CONVOY SECURITY ELEMENTS

4-91. A convoy security force is organized into four elements:

- Reconnaissance element, which performs tasks associated with zone and route reconnaissance forward of the convoy.
- Screen element, which provides early warning and security to the convoy's flanks and rear (troop may utilize outposts).
- Escort element, which provides close-in protection to the convoy. It may also provide a reaction force to assist in repelling or destroying threat contact.
- Reaction force, which provides firepower and support to the elements above in order to assist in developing the situation or conducting a hasty attack. It may also perform duties of the escort element.

4-92. If participating in a convoy security mission under a higher headquarters, the troop may be assigned tasks as the reconnaissance or screening element. Under permissive METT-TC it may be assigned the escort task. If conducting the mission independently, the troop assigns reconnaissance and screening tasks to its reconnaissance platoons and the escort task to attached combat elements. The troop's higher headquarters provides the reaction force.

4-93. The commander must coordinate with the escorted unit to obtain or exchange the following information:

- Time and place of linkup and orders brief.
- Number and type of vehicles to be escorted.
- HVAs within the convoy.
- Available weapon systems, ammunition, and ordnance (crew-served, squad, and individual).
- Vehicle maintenance status and operating speeds.
- Convoy personnel roster.
- Troop or escorted unit SOP, as necessary.

CONVOY SECURITY TECHNIQUES

4-94. The troop commander organizes and coordinates the efforts of his unit to fulfill the critical tasks associated with the convoy security mission. In a nonpermissive environment, the troop should be augmented with attached combat elements to conduct convoy security. A platoon is tasked to conduct a route reconnaissance focusing on route trafficability, threat forces that may influence movement along the route, or refugees or civilian traffic that may disrupt movement. Engineers are attached to the platoon to assist reconnoitering and classifying bridges, fords, and obstacles along the route. Normally the reconnaissance element should operate from 3 to 4 kilometers ahead of the main body of the convoy. If available, UAVs or aerial reconnaissance should precede the reconnaissance element by 5 to 8 kilometers dependent on the terrain and visibility conditions.

4-95. The recce troop assigns the screening task to his two remaining platoons, one to either flank. The BRT organizes its remaining platoon into two sections, with each section performing the flank screen. The troop commander must develop graphic control measures to enable a moving flank screen centered on the convoy. The screen's purpose is to prevent observation for employment of effective indirect fires and identify combat elements prior to a direct fire engagement against the convoy. Screening elements gain and maintain contact with threat reconnaissance and combat elements, employing indirect fire to suppress and guiding reaction or escort elements to defeat or destroy the threat force.

4-96. The combat platoon is assigned the escort mission to provide local security throughout the length of the convoy. It should have an element with engineers deployed as an advance guard to the convoy, with its remaining vehicles dispersed throughout the convoy order of march. The escort element defeats close ambushes and marks bypasses or breaches obstacles identified by reconnaissance as necessary. If the reaction force is not available in sufficient time, the escort element may be required to provide a reaction force to defeat far ambushes or block attacking threat forces.

4-97. In a permissive environment, the troop may conduct convoy security without attachments or augmentation, but it must organize differently to accomplish the same tasks (see Figure 4-13). A platoon is tasked to conduct a route reconnaissance and provide a section for flank security. A second platoon provides security to the other flank and rear. The last platoon is assigned the escort mission for local security and the advance guard. The BRT commander tasks one platoon to conduct a route reconnaissance and security to both flanks and the second platoon to conduct the escort, to include advance and rear guards.

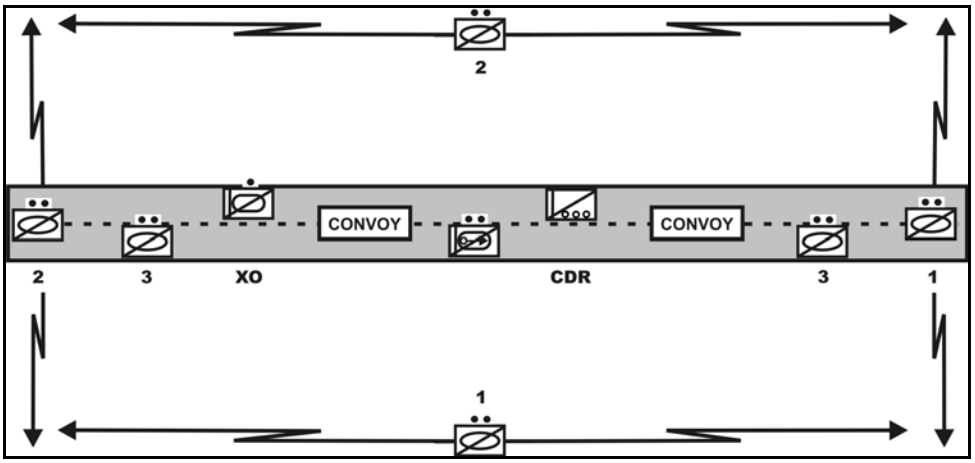


Figure 4-13. Reconnaissance Troop Conducts Convoy Security

4-98. The troop may utilize an outposting technique as an alternative to screen the route after it has been reconnoitered (see Figure 4-14). It is similar to the technique for covering lateral and boundary routes in reconnaissance operations; however, for route security it is generally assigned to a platoon for the specific purpose of securing a route for a convoy. It involves employing OPs on critical portions of the route or on key avenues of approach to the route to provide early warning of threat elements attempting to interdict the route or convoy.

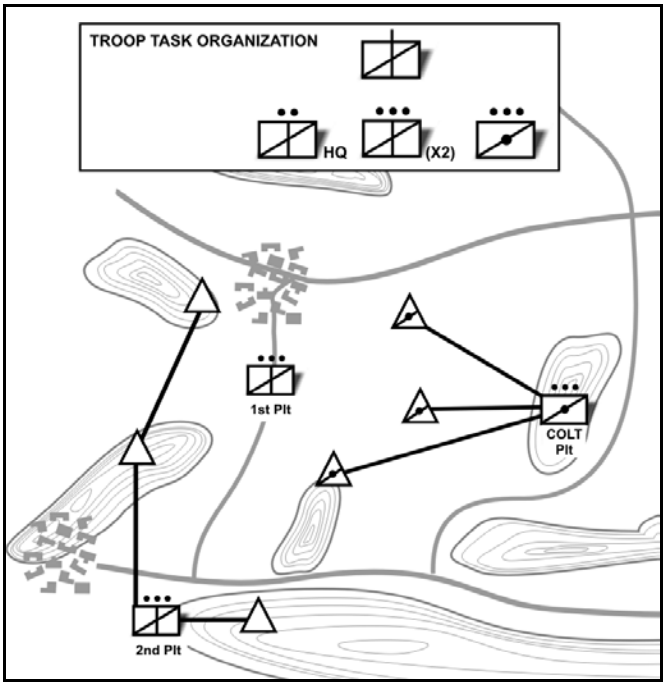


Figure 4-14. Brigade Reconnaissance Troop Conducts Outposting of a Route

4-99. Outposting differs from a conventional screen in that the outposts are oriented on the route rather than on the friendly main body. Normally, the outposting element follows the element that is executing the route reconnaissance (see Figure 4-15). Outposts have a limited ability to destroy small threat forces attempting to influence the route. Their primary purpose is to acquire the threat and then to direct the employment of reaction forces or indirect fire to destroy it.

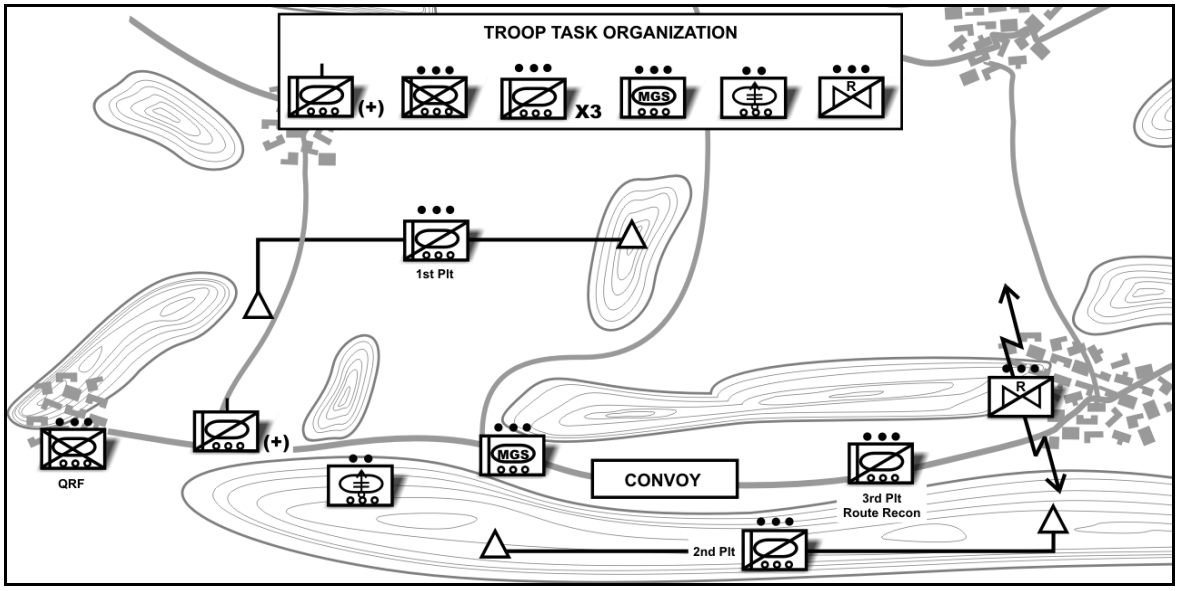


Figure 4-15. Recce Troop Conducts Convoy Security Mission with Outposting

Chapter 5

Other Tactical Operations

Other tactical operations are specialized tasks that require planning and development of training associated with tactics, techniques, and procedures. These types of operations are mainly based on SOPs to ensure they can be conducted quickly and efficiently. Digitization increases the situational awareness of troop leaders during other tactical operations.

CONTENTS

Movement 5-2
Administrative Movement 5-2
Tactical Movement 5-3
Offense 5-9
Purpose 5-9
Characteristics 5-10
Fire and Movement 5-10
Hasty Attack 5-11
Defend as an Economy of Force 5-15
Purpose 5-15
Fundamentals 5-16
Defensive Tasks 5-18
Principles of Fire Control 5-19
Engagement Area Development 5-21
Target Acquisition 5-32
Assembly Areas 5-33
Quartering Party Activities 5-34
Movement and Occupation 5-34
Security 5-34
Readiness Condition Levels 5-35
Routine Tasks 5-36
Relief in Place 5-36
Methods of Relief in Place 5-37
Planning 5-38
Sequence of Relief 5-39
Passage of Command 5-39
Reconnaissance 5-39
Security 5-39
Movement Control 5-40
Passage of Lines 5-40
Key Tasks 5-40
Graphic Control Measures 5-41
Planning Considerations 5-44
Breach Operations 5-45
Breaching Fundamentals 5-45
Planning Considerations 5-46

These operations may be considered a routine part of the combat operations discussed in preceding chapters; however, they are no less important. This chapter focuses on—

- Movement.
- Limited offensive and defensive operations.
- Target acquisition in support of the BCT's fire support plan.
- Specialized tasks such as relief in place, passage of lines, and breaches.

The differences in the capabilities and limitations between the recce troop and the BRT associated with their TOEs and METT-TC must be considered in the assignment and performance of other tactical operations. The recce troop is capable of performing some missions with or without reinforcement that the BRT is not (see Figure 5-1).

	Recce Troop	BRT
Movement	F	F
Offensive Operations		
Fire and Movement	P	P
Hasty Attack	R/P	NC
Defensive Operations as an Economy of Force		
Defend an AO	R/P	NC
Defend a BP	R/P	NC
Target Acquisition	F	F
Assembly Area Activities	F	F
Relief in Place	F	F
Passage of Lines	F	F
Breach Operations	R/P	R/P
F = Fully Capable R = Capable When Reinforced P = Capable Under Permissive METT-TC NC = Not Capable		

Figure 5-1. Troop Capabilities in Other Operations

SECTION I - MOVEMENT

5-1. Based on reconnaissance missions and decentralized execution, troop maneuver does not lend itself to strict formations and their associated movement techniques unless conducting missions that require greater C2 and mutual observation and support between platoons.

5-2. Movement within the various operational environments can be complex to execute when considering heavy route congestion, battlefield debris, limited route priority, converging forces, threat ground or air interdiction, civilian noncombatants, effects of terrain, and requirements to cross unit boundaries. In a noncontiguous environment, movement planning is paramount to the troop's successful repositioning within and between AOs. Movements may be classified as administrative or tactical.

ADMINISTRATIVE MOVEMENT

5-3. Administrative movement occurs in the communications zone to deploy or reposition forces. Administrative movements are planned by the higher headquarters S4, and are normally closely coordinated and controlled by the movement control center responsible for that communications zone. Administrative movement may include reception, staging, onward movement, and integration (RSOI) activities as required for the brigade's deployment into an AO.

TACTICAL MOVEMENT

5-4. Tactical movement includes movement and maneuver during reconnaissance or when contact is anticipated. In a tactical movement, troop elements are organized to react to or facilitate combat. Movement in a combat zone of corps and below is considered tactical, as is movement around an area of responsibility while participating in stability or support operations. Tactical movements are planned by the higher headquarters S3, with the XO serving as the movement control officer. In rear areas they are coordinated with movement control centers.

5-5. Tactical movements may be conducted by ground, air, rail, or water. Ground movements are normally conducted using tactical movement or as road marches. Tactical movement includes formations and techniques that enable a unit to traverse terrain. These formations and techniques (traveling, traveling overwatch, or bounding overwatch) are determined by the likelihood of enemy contact. Road marches are characterized by the following factors:

- Unit relocation when threat contact is not expected.
- Prescribed rates of march and intervals.
- Rapid movement.
- Security.

5-6. Maneuver is the movement of combat forces on the battlefield in relation to the threat. Supported by fire or potential fire from all sources, combat forces maneuver to gain positional advantage from which to destroy or threaten destruction of the threat to accomplish the mission (see FM 1-02 [FM 101-5-1]).

5-7. Troop tactical movement is completely dependent on METT-TC and reconnaissance tempo, reconnaissance focus, and engagement criteria. Tactical movement is executed to allow flexibility in reacting to known or chance contact and to minimize casualties and vehicle losses. Troop movement control may be decentralized, with platoons moving and executing tasks that are not mutually supportive. Platoons may move separately, either mounted or dismounted.

5-8. The troop commander should consider the following while planning tactical movement in conjunction with a reconnaissance or security mission.

- Determine and adjust mounted and dismounted movement that reflects the reconnaissance tempo, threat weapon system stand-off ranges, NOD capabilities, and enables contact to be gained under the most advantageous conditions.
- Determine troop formations when moving under centralized control, and platoon positioning/orientation under decentralized control.
    - Column when speed is critical, ease of control is desired, and/or troop is moving through restrictive terrain or on a route.

- Line when speed is not critical, troop is reconnoitering across a front with minimal threat contact, or conducting security or defensive operations.
- Vee when contact is possible, troop is reconnoitering terrain allowing dispersion, and/or forward reconnaissance is required with a follow-and-assume/support, reserve, or follow-on mission requirement.

- Develop graphic control measures that enable centralized or decentralized control.
  - Assign platoon AOs, axes of advance, or routes to facilitate decentralized control.
  - Identify checkpoints and GIRS/TIRS to enable flexibility during movement.
- Determine positions and movement of commander and troop control elements to best observe and influence operations while maintaining contact with higher and adjacent units.
- Identify communication methods and techniques to command and control the operation based on higher headquarters limitations and other METT-TC factors.
- If applicable, determine troop movement techniques based on reconnaissance tempo, likelihood of enemy contact, and/or ability of platoons to provide mutual support.
- If available, position and move attached combat elements in depth behind the reconnaissance platoons to attack or defend in support of reconnaissance elements.
- If available, position and move the mortar section to provide fires across the troop front, or at least to the main effort, while maintaining one-third to two-thirds of their effective range to the front of the lead scouts.

TACTICAL ROAD MARCH

5-9. Successful road movements must be well organized. The organization and responsibilities of the troop and its higher headquarters for road marches are best suited for inclusion in the unit SOP. Units organize into march columns to conduct movement. A march column includes all elements of a force using the same routes for a single movement under the control of a single commander. Whenever possible, battalions and above march in multiple columns over multiple routes to reduce closing time. A large column may be composed of four elements, each under the control of a subordinate commander. When conducting a road march under control of its higher headquarters, the troop is assigned and/or provides elements to the following:

- Reconnaissance party.
- Quartering party.
- Main body.
- Trail party.

Reconnaissance Party

5-10. The size of the reconnaissance party depends on the factors of METT-TC and the number of routes. It normally consists of a reconnaissance platoon, but for a brigade-sized element, it may involve the entire troop on one or more routes. It may be preceded by UAVs to gather initial information about the route(s) and surrounding terrain. The party may have engineers and combat elements attached, depending on the expected threat. The party normally moves by infiltration and reports to the movement control officer who determines the report times, information requirements, follow-on mission after completion of the reconnaissance, and coordinates bypasses, as necessary. The reconnaissance party conducts route reconnaissance with a potential follow-on mission of area reconnaissance of the unit's march destination such as an assembly area.

Quartering Party

5-11. The quartering party is normally a composite higher headquarters organization consisting of subordinate element quartering parties. They are employed when the unit is going to occupy an assembly area upon arrival at its march destination. The higher headquarters provides a command and control element, such as a tactical or jump CP, and the party moves by infiltration. Subordinate element quartering parties should be organized and conducted as a combat patrol and are normally led by the XO or 1SG with sufficient personnel to clear and secure their assigned area.

Main Body

5-12. The main body is composed of the bulk of the troop's higher headquarters and is organized into serials and march units. Within a brigade-sized march column, battalions and squadrons are considered serials, divided into company/troop or platoon-sized march units. Serials and march units should move task organized for the follow-on mission when possible.

Trail Party

5-13. The trail party is organized to conduct repair and recovery of vehicles, medical aid and evacuation, and unscheduled refueling. In addition to the march column trail party, each serial has a trail party as its last march unit. It is organized from the unit's combat trains under control of the maintenance officer. If a vehicle cannot be repaired or towed by the serial trail party, the crew is left with the vehicle and the trail party must coordinate with the march unit trail party or return for its recovery. The movement order must address other criteria and actions in such cases, such as vehicle destruction, based on METT-TC.

PLANNING CONSIDERATIONS

5-14. Movement may be considered either deliberate or hasty. Deliberate movements are normally administrative in nature and may require crossing corps, divisional, joint task force, or national boundaries. Hasty movements are normally in conjunction with combat operations with the troop moving across the parent unit's AO, especially in a noncontiguous environment.

5-15. Movement is heavily determined by backwards planning. The mission following the movement determines the movement completion times, pass times, start times, and march serial and unit organization. The basic considerations in planning a road march are listed below:

- Time available.
- Distance of the move.
- Current threat situation.
- Availability and condition of routes.
- Size of the unit.
- Types, numbers, and characteristics of vehicles that must move.

5-16. When moving as part of a higher headquarters road march, and not tasked as the reconnaissance party, the troop will normally be a march unit as part of the main body, providing a quartering party to the quartering party element. If the troop is conducting an independent road march, it organizes into three elements: the quartering party, the main body, and the trail element.

- **Quartering party.** The quartering party reconnoiters and prepares the march destination area before the troop main body arrives.
- **Main body.** The troop normally moves as a single march unit in column formation when conducting a tactical road march. To ensure dispersion and prevent congestion, the unit uses march columns based on the commander's METT-TC assessment and situational requirements.
- **Trail element.** The trail element, under the supervision of the 1SG or XO, is composed of personnel and equipment normally assigned to the troop trains. Depending on the logistical support available to the troop, this party handles emergency vehicle repair, recovery, medical aid and evacuation, and immediate refueling. As a minimum, the trail party assesses maintenance problems within its capabilities, and coordinates recovery and repair with the higher headquarters.

5-17. As part of troop-leading procedures, the commander considers or takes the following actions:

- Prepare and issue a WARNO, using FBCB2, FM, or oral communication, giving the troop's mission, SP location and time, earliest time for movement from present location to SP, preparation timeline, and any follow-on missions. This enables the platoon leaders time to execute their troop-leading procedures in preparation for the movement.
- Analyze the situation to determine if any of the movement factors (such as order of march, rate of march, or interval) specified in the troop SOP must be altered to meet mission requirements.

- Identify critical points that may cause congestion, canalization, or timing problems along the route of march.
- For limited visibility movement, consider the effects on navigation and march speed because of capabilities and variations of different night observation devices in use by the troop and attached elements.
- Conduct a map reconnaissance of the route (if assigned) or determine the best available route.
- Time permitting, the troop commander or designated representative, such as the lead platoon leader, should conduct a reconnaissance from the initial position to the SP to determine travel time. Scheduled halts can be designated on the digital overlay along the route of march.
- Organize and dispatch the quartering party (if occupying an assembly area).
- Prepare the movement order with FBCB2 overlays, strip maps for non-FBCB2-equipped vehicles, or acetate overlays based on mission requirements and reconnaissance information.
- Establish the readiness condition (REDCON).

5-18. The troop movement order should contain the following information:

- March order.
- Start point.
- Designated route of march, including waypoint data.
- March speed.
- Formations.
- Intervals.
- Weapons orientation.
- Actions at halts, both scheduled and unscheduled.
- Release point.
- Actions at release point.
- Final positions.
- Critical points (such as choke points, fords, or ambush sites).
- Threat situation.
- TIRS/GIRS.
- Rally points.

OVERLAYS

5-19. The troop commander prepares a FBCB2 digital overlay that depicts the designated route of march, SP, selected checkpoints, scheduled halts, and RP. The SP should be near recognizable terrain and far enough away from the march unit's initial position to allow it time to deploy into march formation prior to reaching it.

5-20. Acetate overlays are prepared for analog units or for backups to the digital overlays in the event of digital failure or the attachment of nondigitized units. They contain the same information as the digital overlay. Strip maps and traffic control points help control analog elements attached or OPCON to the troop. The strip map should contain the same information that is displayed on the digital and/or acetate overlay, to include the distances between points. Detailed sketches of the scheduled halts and potentially confusing areas should be provided to each driver and included in the strip map.

ACTIONS DURING THE MARCH

5-21. The troop commander positions himself where he can best control the movement of the troop. This may be behind the lead platoon, to respond to contingencies while on the move. If applicable, the troop CP should be positioned farther back in the column as a security measure to disperse C2.

5-22. During the road march, the troop commander and the XO or CP monitors the progress of the troop on tactical displays, reviewing FBCB2 reports as required. This facilitates movement under radio listening silence or results in a significant reduction in FM communication. The troop commander can track the progress of his troop on the automated operations overlay during movement to and occupation of the assembly area.

5-23. The troop's column organization must provide adequate security against air and ground threats while on the move and during halts. The troop performs the march in open or close column, depending on the situation.

- **Close column.** A close column is normally used during limited visibility conditions. Vehicles are typically spaced 25 to 50 meters apart and vehicle density is 15 to 30 vehicles per kilometer along the route of march. Close column may be used if road space is critical or to speed movement and reduce the likelihood of an element getting lost or leaving the desired route.
- **Open column.** Open column formation is used when greater dispersion and security are desired. In this case, the distance between vehicles varies from 50 to 100 meters. Open column is normally used in daylight conditions. The troop's march speed is based on the slowest vehicle in the column.

5-24. See Figure 5-2 for a way to organize a troop march column. This order of march provides 360-degree security, disperses the C2 assets of the troop, and provides reconnaissance forward of the main body. Vehicle commanders assign sectors of observation to their crews, who search for air and ground threats.

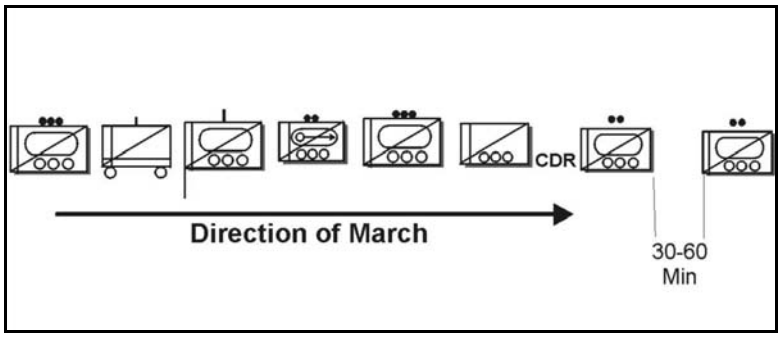


Figure 5-2. Troop Column Organization

5-25. Halts are used to rest personnel, provide personal comfort and relief, facilitate mess operations, refuel vehicles, maintain and inspect equipment, adjust the schedule, and allow other traffic to pass. They may be scheduled or unscheduled. Scheduled halts must be factored into march table and movement times. The troop SOP and/or movement order specifies the frequency and duration of halts, and prioritizes actions during them. They also specify actions at unscheduled halts to determine the reason for the halt, correct the problem, and resume the march as quickly as possible. Units provide for security during all halts, and establish OPs to provide early warning of threat forces during any halt.

5-26. Vehicles that become disabled during movement must not obstruct traffic. The crew of the disabled vehicle moves the vehicle off the route, posts guides to direct traffic, and finds the problem. If the vehicle can be fixed, it rejoins the rear of the column. It does not return to its original position until the column has halted. If the vehicle cannot be readily repaired, the troop trail element recovers it, if applicable, or it is reported to the higher headquarters trail party for recovery.

SECTION II - OFFENSE

5-27. The troop usually performs reconnaissance and security missions in support of brigade offensive operations. Both recce troop and BRT may take limited offensive action as part of its actions on contact to develop the situation or break contact when other methods fail or are not possible. In addition, the recce troop may perform certain offensive missions as part of a squadron, other combined arms force, or within an economy-of-force role for a higher headquarters. FBCB2 allows greater situational understanding and facilitates command and control for offensive operations, enabling the troop to remain dispersed and maneuver to gain a positional advantage out of contact.

PURPOSE

5-28. Offensive operations aim at destroying or defeating a threat. Offensive operations are also undertaken to seize decisive terrain, deprive the threat of resources, gain information, deceive or divert the threat, develop intelligence, or hold the threat in position.

CHARACTERISTICS

5-29. Surprise, concentration, tempo, and audacity characterize the offense. Effective offensive operations capitalize on accurate intelligence and other relative information regarding threat forces, weather, and terrain. The commander maneuvers his force to advantageous positions prior to visual or direct fire contact. Security operations prevent or inhibit the threat from acquiring accurate information about friendly forces. Contact with threat forces prior to decisive operations are deliberate, designed to shape the situation for decisive success. The decisive operation is a sudden, shattering action that capitalizes on subordinate initiative and the common operating picture.

- **Surprise.** Strike the threat at the time and place or in a manner that is least expected.
- **Concentration.** Mass available forces and/or fires; achieve overwhelming superiority in men, weapons, and firepower. The commander must maintain situational awareness to anticipate the battlespace conditions that allow him to mass at the critical point, achieve decisive success, and quickly disperse to continue the mission.
- **Tempo.** Tempo is the rate of speed of military action. Controlling or altering the rate is essential for maintaining the initiative. Tempo can be fast or slow, depending on the capabilities of the unit relative to those of the threat. Commanders must adjust tempo based on METT-TC to ensure synchronization.
- **Audacity.** Boldness in the plan's execution is key to success in offensive operations. Commanders must analyze and accept tactical risk to enable violent execution without hesitation to break the threat's will or destroy him.

FIRE AND MOVEMENT

5-30. The troop normally conducts fire and movement to develop the situation or after actions on contact if the commander determines the necessity to maintain reconnaissance tempo against an inferior threat or gain a positional advantage over a superior threat force. In gaining a positional advantage, the commander has identified terrain that enables the troop to better maintain observation, target and engage the threat with indirect fires, assist a troop element to break contact, or enable transition to a subsequent mission. An essential consideration during the commander's decision to employ fire and movement is whether, upon completion, he will have sufficient combat power to continue his reconnaissance or security mission.

5-31. The commander must anticipate and plan for successful fire and movement. He must coordinate indirect fire to suppress threat forces and obscure movement. The commander ensures that indirect fires have achieved their desired effect and/or smoke has built up before initiating movement. As a minimum, he considers—

- Identifies targets and determines desired effect (suppress, neutralize, obscure, or destroy) and purpose for fires.

- If necessary, determines time on target to support movement and trigger to initiate fires.
- If necessary, identifies primary and alternate observers and criteria to lift fires.

5-32. The troop establishes a base of fire element with sufficient fire power to suppress the threat with direct fire as necessary. The element occupies positions that afford clear observation for targeting and fields of fire providing coverage of both the threat and the friendly moving elements. The overwatching element uses direct and indirect fires to achieve the desired effect against the threat force, shifting or redistributing fires as necessary to achieve or maintain the desired effects on the threat force. The commander may also direct the element to initiate and adjust indirect fires as necessary. The base of fire element should maintain local security to prevent a close assault by the threat. It should maintain observation with fields of fire to its flanks and rear, and be prepared to reposition weapon systems to defend itself while maintaining suppressive fires in support of the moving friendly element.

5-33. The maneuvering element bounds to a position that provides either positional advantage over the threat for surveillance and/or targeting, or a position from which to suppress the threat in support of continued movement towards an advantageous position or to break contact. The maneuvering element must also maintain local security to prevent ambush or close assault that may include using bounding within the element or employing dismounted scouts to reconnoiter dead space or positions prior to occupation by vehicles.

5-34. Although the commander positions himself to best observe and influence operations, he will not be able to observe the actions of the entire troop. In addition to the increase situational understanding provided FBCB2, it is critical that subordinate leaders cross-talk during fire and maneuver and provide the commander with information and recommendations using the communications system that allows him to make timely decisions. Subordinate leader recommendations may include how to adapt to changes in the situation or how to exploit opportunities provided through fire and maneuver.

HASTY ATTACK

5-35. A hasty attack is conducted with a minimum of preparation to defeat a threat force that is not prepared or deployed to fight. It is a course of action routinely employed in reconnaissance operations to seize or retain the initiative, or to sustain the tempo of operations. It may also be employed in area security operations to defeat penetrations of the perimeter, or during convoy security to defeat or respond to an ambush. Once the attack is completed, immediately establish hasty defensive positions and OPs on high-speed avenues of approach into the troop position.

5-36. The decision to conduct a hasty attack is usually made after a reconnaissance of a threat force, and dispositions show that winning requires a quick strike with little preparation. Under no circumstances should a hasty attack be ordered unless the threat position has been thoroughly reconnoitered and the individual positions are known.

KEY TASKS

5-37. To successfully execute a hasty attack, the following key tasks must be accomplished by using a mix of all available assets such as UAV, GSR, scout platoons:

- Reconnoiter to determine the size, composition, and orientation of the threat force.
- Determine if the objective threat force is mutually supported or can be immediately reinforced by nearby units.
- Find a covered and concealed approach into the threat's flank(s).
- Isolate the objective threat force from other mutually supporting units with indirect fires (usually with smoke and HE mortar/FA ammunition, or a scout platoon).
- Establish a base-of-fire element to defeat or suppress all observed threat weapons with long-range direct and indirect fires before the maneuver force deploys into its attack.
- Identify the maneuver element to move to a position of advantage and attack the threat by fire.
- Achieve the desired effect by supporting direct and indirect fires, then attack the threat by fire or by fire and movement to destroy or defeat it.

TECHNIQUES

5-38. The key tasks must be synchronized, and a successful attack depends on the commander's sense of timing and on his ability to employ his forces to accomplish the tasks in the proper sequence. The commander has to apply different forms of combat power against the threat at the right times and places. Techniques for conducting a hasty attack have three features:

- Known threat weapons are destroyed or suppressed with direct and indirect fires before the maneuver force is committed.
- The threat is forced to fight in two directions.
- The objective is isolated.
- The threat is suppressed and unable to react.

ESTABLISHING THE CONDITIONS FOR A HASTY ATTACK

5-39. The scout platoon in contact continues to reconnoiter the threat's position with one element maintaining contact while other scout elements reconnoiter to gather information for the hasty attack. However, the commander may have to direct another platoon to conduct the reconnaissance based on METT-TC. The designated platoon develops the situation by identifying the threat flanks and rear and determining the presence of mutually supporting threat forces. The commander may also direct elements not in contact to provide security for the attack on

the flanks. The scouts identify routes to close on the threat force, support-by-fire positions, and, if applicable, attack-by-fire or assault positions.

5-40. The FIST, if assigned, XO, or a designated element occupies a position that provides observation of the threat force and known or suspected supporting positions to control the indirect fires. If assigned, the mortar section occupies a firing position and prepares to screen maneuver or suppress the threat position.

5-41. If the troop has attached tank, MGS, or AT platoons, a scout platoon provides guides to support- or attack-by-fire positions at a contact point. They may also guide an infantry platoon to its assault position.

5-42. The commander either collocates with an overwatching element or follows the assault or attack-by-fire force to best control and influence the attack. The XO positions to best assist the commander and keep the higher commander informed. The 1SG moves medics to support the attacking or assaulting force.

INDIRECT FIRES IN SUPPORT OF A HASTY ATTACK

5-43. Indirect fires must complement the troop's scheme of maneuver, and can be the best weapon of destruction available to the troop. The troop can acquire and engage the threat with indirect fire from positions offering cover and concealment from threat direct and indirect fire. To effectively employ indirect fire, the troop commander must determine the following:

- Who will control the indirect fires during the hasty attack?
- Who will initiate indirect fires onto the objective?
- Who will shift the indirect fires to subsequent targets?
- What will the signal be for shifting indirect fires?
- Are there any restrictive fire measures or restrictive fire areas?
- Are there any restrictions of DPICM munitions in the ROE or due to tactical considerations, such as friendly forces moving on the objective after fires are executed?

5-44. The commander uses METT-TC to answer these questions. If available, control measures can be quickly disseminated using FBCB2. Under most conditions the FIST, if assigned, or XO should be positioned to control the engagement of indirect fire systems. The troop commander uses available indirect fires to—

- Suppress the threat while scouts are maneuvering to develop the situation.
- Obscure threat observation of scouts during reconnaissance, or the assault element during the attack.
- Isolate the threat contact by firing HE mortars and smoke between the threat force and any possible supporting positions.
- Shift indirect fires off the objective to block threat withdrawal routes.

DIRECT FIRES DURING A HASTY ATTACK

5-45. The troop commander should strive to engage the threat with a combination of direct and indirect fire weapons. Direct fires must be controlled. The commander must determine the following before executing a hasty attack:

- What is the trigger and who will initiate direct fires into the objective area and from where will they be initiated?
- What is the aim point for the support element? What is the trigger and when and to where do they shift fires?
- How are suppressive fires maintained? What are the ammunition consumption and resupply considerations?
- When and how are SBF positions shifted or repositioned to minimize effects of threat indirect and direct fires?
- How are fires controlled (focused, distributed and shifted)?
- What is the limit of advance for the assault force?

ACTIONS AFTER A HASTY ATTACK

5-46. Once threat resistance in the objective area has ceased, the troop may begin consolidating in preparation of continuing its mission.

- Dismounted scouts clear the area as soon as possible, securing prisoners and searching for items of intelligence value.
- Immediately establish a hasty defense oriented on mounted and/or dismounted counterattack approaches into the troop position.
- Redistribute ammunition and balance crews as time allows.
- Replace key leaders quickly.
- If available, position the mortar section and have the guns lay on the most likely threat avenue of approach.
- If time is available and threat counterattack unlikely, begin resupply operations.

DETERMINE WHERE AND HOW TO MASS FIRES

5-47. To achieve decisive effects, friendly forces must mass their fires. Effective massing requires the commander to focus the fires of subordinate elements and to distribute the effects of the fires. Based on his estimate of the situation and his concept of the operation, the commander identifies points where he wants to, or must, focus the unit's fires. Most often, these are locations he has identified as probable threat positions or points along likely avenues of approach where the unit can mass fires. The commander plans the focus of fires by placing control measures on and beyond the identified position or point. Because subordinate elements may not initially be oriented on the point where the commander wants to mass fires, he may issue a fire command utilizing the added control measures to focus the fires. At the same time, the commander must use direct fire control measures to effectively distribute the fires of his elements, which are now focused on the same point. Figure 5-3 illustrates how the commander masses fires against the threat.

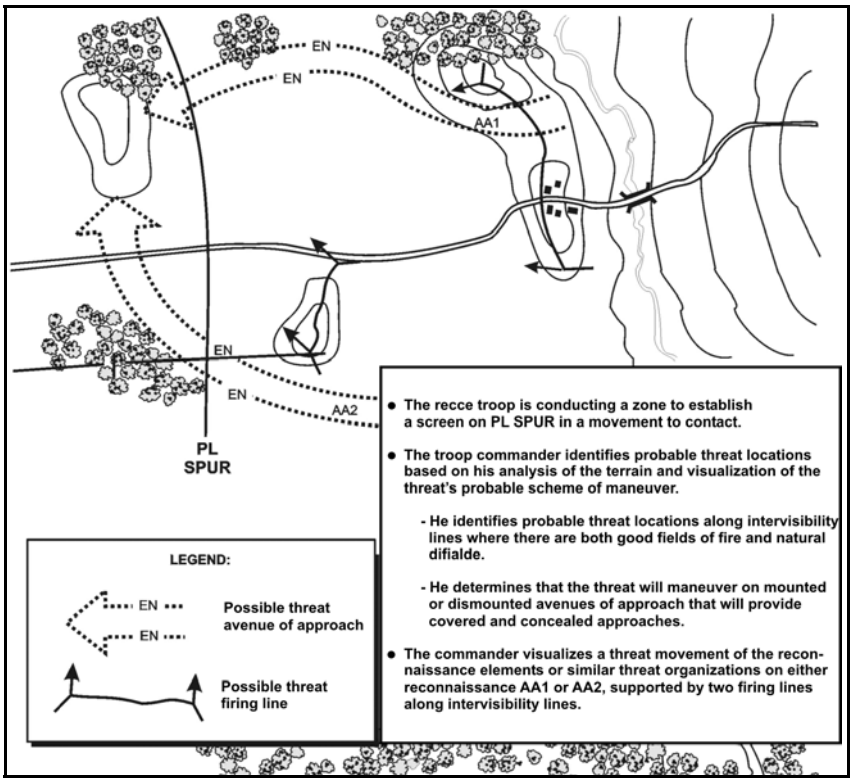

EN
EN
AA1
EN
EN
AA2
PL
SPUR
LEGEND:
EN
EN
Possible threat avenue of approach
Possible threat firing line
• The recce troop is conducting a zone to establish a screen on PL SPUR in a movement to contact.
• The troop commander identifies probable threat locations based on his analysis of the terrain and visualization of the threat's probable scheme of maneuver.
- He identifies probable threat locations along intervisibility lines where there are both good fields of fire and natural difialde.
- He determines that the threat will maneuver on mounted or dismounted avenues of approach that will provide covered and concealed approaches.
• The commander visualizes a threat movement of the reconnaissance elements or similar threat organizations on either reconnaissance AA1 or AA2, supported by two firing lines along intervisibility lines.

Figure 5-3. Example of Identifying Probable Threat Locations and Determining Threat Scheme of Maneuver

SECTION III - DEFEND AS AN ECONOMY OF FORCE

5-48. The troop normally conducts security missions during brigade defensive operations. Generally, the troop defends a perimeter during area security of a high-value asset. When required and adequately augmented, the troop may also conduct a defensive mission as an economy-of-force mission. The troop must be augmented with tank or mechanized forces to defend against a mechanized, motorized, or light infantry force. The troop does not have the antiarmor or dismount capability to defend an AO or BP that may include a dismounted threat assault. FBCB2 assists situational awareness, reducing the possibility of duplicate SPOTREPs and providing the commander a more accurate threat picture on which to base his decisions. It also facilitates command and control for defensive operations, enabling the commander to issue FRAGOs and shift forces quicker to defeat the threat's intent.

PURPOSE

5-49. Defensive operations defeat a threat attack, buy time, economize forces, or develop conditions favorable for offensive operations. Defensive operations alone are not decisive, but create the conditions for a counteroffensive to regain the initiative (FM 3-90 [FM 100-40]).

5-50. Defensive operations may also be conducted to—

- Retain or deny decisive terrain to the threat.
- Attrit or fix the threat as a prelude to offensive operations.
- Increase the threat's vulnerability by forcing him to concentrate his forces.

FUNDAMENTALS

5-51. Eight fundamentals are common to defensive operations. These are—

- Position elements and obstacles in depth.
- Disperse subordinate elements.
- Employ security measures.
- Maximize terrain advantages.
- Disrupt or stop the threat rate of advance.
- Mass combat power at the right place and time.
- Force the threat to fight in two directions.
- Counterattack.

POSITION PLATOONS/OBSTACLES IN DEPTH

5-52. Depth allows the troop to—

- Gain threat contact early.
- Perform counterreconnaissance tasks.
- Ascertain threat direction of attack/intentions.
- Develop the situation, providing reaction time and maneuver space to concentrate combat power when and where it is needed.

DISPERSE SUBORDINATE ELEMENTS

5-53. Deploy subordinate elements as far apart as possible without losing their ability to concentrate (mass) firepower against the threat and to mutually support each other. The more dispersed the troop, the harder it is for the threat to mass fires against it as a whole. However, do not allow the threat to concentrate its forces or fires against isolated elements.

EMPLOY SECURITY MEASURES

5-54. The troop may employ passive or active measures, or a combination of techniques. All must be considered in the defensive plan. See Figure 5-4 for examples of passive and active security measures.

Passive	Active
Disperse vehicles and platoons.	Screen/establish OPs.
Use camouflage/cover and concealment.	Perform mounted/dismounted patrols.
Impose radio listening silence.	Establish GSR posts.
Use hide positions.	Establish M8 chemical alarm net.
Enforce noise and light discipline.	
Minimize movement.	
Do not position in likely target areas.	

Figure 5-4. Examples of Passive and Active Security Measures

MAXIMIZE TERRAIN ADVANTAGES

5-55. Reconnoiter the terrain from both the troop's and the threat's view to determine the following:

- Avenues of approach, to include infiltration, reconnaissance, mounted, and dismounted.
- Restricted/severely restricted areas.
- Defiles (canalizing terrain).
- Engagement areas.
- Battle positions.
- Subsequent and alternate BPs.
- Hide positions to support BPs.
- OP positions forward of defensive positions.
- Subsequent and alternate OP positions.
- Positions where obstacles can be tied in with natural obstacles to turn, disrupt, or block the threat.
- Positions that facilitate counterattacking by fire or by fire and maneuver into the flanks and throughout the depth of the threat.
- Routes to and from each position.

DISRUPT OR STOP THREAT RATE OF ADVANCE

5-56. Offense is based on two principles—speed and mass. Develop a defensive plan that disrupts the momentum of the threat attack through the use of obstacles and fires (direct and indirect). If most of its combat power is destroyed, the threat will be forced to establish a hasty defense or withdraw.

MASS COMBAT POWER AT THE RIGHT PLACE AND TIME

5-57. The troop must mass fires against the threat where and when it is least able to escape the effects to defeat a massed attack. The ability of the troop to mass combat power when and where it is needed is a function of—

- Early warning and reaction time.
- Responsive and rapid maneuver by subordinate elements.

FORCE THE THREAT TO FIGHT IN TWO DIRECTIONS

5-58. Position and maneuver platoons to force the threat to fight in two or more directions. This exposes threat flanks and forces threat forces to split their fires, preventing them from concentrating fires.

COUNTERATTACK

5-59. Draw the threat into structured engagement areas and attack en masse with overwhelming firepower to destroy it quickly and decisively. Maneuver forces to exploit the situation to wrest the initiative from the threat. Use fire and movement and attack by fire and by fire and maneuver against threat flanks and throughout the depth of its formation.

DEFENSIVE TASKS

5-60. The troop may be assigned one of two defensive tasks by its higher headquarters.

- Defend from a BP.
- Defend an AO.

5-61. The commander may also develop his scheme of maneuver using platoon BPs, AOs, or a combination of the two.

DEFEND FROM A TROOP BATTLE POSITION

5-62. The troop is assigned a battle position when the threat situation is clear, there are limited avenues of approach, and/or its higher headquarters desires centralized control. The troop cannot maneuver outside the position without the higher commander's permission. The troop commander closely controls the actions and movement of subordinate elements within and between BPs. Within the BP, the troop commander positions his platoons to concentrate all direct fires on or into a designated location. The troop fights to retain the position unless ordered by the higher commander to counterattack or withdraw.

5-63. To successfully defend from a troop BP, the following key tasks must be accomplished:

- Decide where the threat will be killed and designate the engagement area.
- Establish OPs oriented forward and to the flanks of the BP to gain contact with the threat force and provide early warning.
- Establish primary and alternate platoon BPs to concentrate direct fires within the engagement area as directed by the higher commander.
- Designate supplementary platoon BPs to cover other routes of threat approach.
- Establish sectors of fire for each platoon.
- Reconnoiter and establish platoon routes from hide positions to platoon BPs and for withdrawal to subsequent platoon/troop BPs.

DEFEND AN AREA OF OPERATIONS

5-64. This method may be used when the AO has adequate depth, when the threat situation is vague, when there is more than one avenue of approach, or when the higher headquarters allows decentralized control and subordinate elements require more freedom of action. In this scheme of maneuver, the focus is on emplacing obstacles and utilizing indirect fires to disrupt and defeat the threat attack. The higher headquarters commander delegates much of the responsibility for fighting the battle to his subordinate leaders within their AOs. The troop commander focuses on coordinating fire support and engineer assets, and maneuvering his subordinate elements before they become fixed in position or destroyed. METT-TC considerations determine optimal troop AO width; however, the troop is normally allocated a sector oriented on a single battalion-size avenue of approach.

5-65. Troops may defend an AO when—

- The squadron/brigade cannot concentrate its fires due to the following:
  - Extended frontages.
  - Defending along a cross compartment.
  - Multiple avenues of approach.
- Retention of specific terrain features is not necessary.
- The depth of the AO is needed to dissipate the threat's attack.
- Maximum flexibility to maneuver is desired.

5-66. To successfully defend an AO, the following key tasks must be accomplished:

- Maintain continuous surveillance of all avenues of approach into the troop AO.
- Destroy or repel all threat reconnaissance elements forward of the troop's initial defensive positions (counterreconnaissance).
- Shape the battlefield by utilizing obstacles and indirect fire to canalize the threat onto a single avenue of approach and/or into engagement areas.
- Structure engagement areas.
- Position platoon BPs to support engagement areas.
- Engage the threat from more than one direction.
- Determine criteria for initiating fires, counterattack, and disengagement.
- Prevent the threat from penetrating the troop rear boundary or designated phase line.

PRINCIPLES OF FIRE CONTROL

5-67. The troop's primary goal in any direct fire engagement is to both acquire first and shoot first. Effective fire control requires a unit to rapidly acquire the threat and mass the effects of fires to achieve decisive

results in the close fight. The troop commander must describe how he expects contact, how targets are acquired, who engages targets with what weapon system, and what the desired effects and/or threat destroyed are. This information allows subordinates the freedom to act quickly upon acquisition of the threat. The commander should consider the following principles:

- Mass the effects of fire.
- Destroy the greatest threat first.
- Employ the best weapon for the target.
- Avoid target overkill.
- Minimize friendly exposure.
- Prevent fratricide.
- Plan for extreme limited visibility conditions.
- Develop contingencies for diminished capabilities.

MASS THE EFFECTS OF FIRE

5-68. Random application of fires is unlikely to have a decisive effect. The troop must mass its fires to achieve decisive results. The commander and subordinate leaders must establish and utilize control measures and engagement techniques to control and rapidly mass fires at the desired point. An inherent problem is that the troop may be dispersed across a wide AO, with platoons not being mutually supportive. In this case, the commander must determine how to shift forces and use the depth of his AO to mass effects.

DESTROY THE GREATEST THREAT FIRST

5-69. The most dangerous targets are engaged and destroyed first. The commander uses the factors of METT-TC to determine the most dangerous targets based on terrain visibility, weapons, effective range, and positioning. Presented with multiple targets, a unit should initially concentrate fires to destroy the greatest threat, and then distribute fires over the remainder of the threat force.

EMPLOY THE BEST WEAPON FOR THE TARGET

5-70. The commander must determine how to best deploy weapon systems against threat targets based on the target type, range, exposure, and ammunition available. The commander task organizes and arrays his forces based on the terrain, threat, and desired effects of fires. Subordinate leaders should consider individual crew capabilities when determining the specific employment of weapons.

AVOID TARGET OVERKILL

5-71. Plan or allocate fires to achieve necessary effects. The commander and subordinate leaders use control measures and engagement techniques to concentrate fires, yet avoid engaging single targets with multiple weapon systems. Target overkill wastes ammunition and ties up weapons that are better employed acquiring and engaging other targets.

MINIMIZE FRIENDLY EXPOSURE

5-72. Units increase their survivability by exposing themselves to the threat only to the extent necessary to engage it effectively. Natural or manmade defilade provides the best cover from kinetic-energy direct fire munitions. Crews and squads minimize their exposure by constantly seeking effective available cover, attempting to engage the threat from the flank, remaining dispersed, firing from multiple positions, and limiting engagement times.

PREVENT FRATRICIDE

5-73. The commander must be proactive in reducing the risk of fratricide and noncombatant casualties. Fratricide prevention starts with identification training for combat vehicles and aircraft. During operations the commander must integrate his control measures into those from his higher headquarters and disseminate them throughout the troop. He prescribes the troop's weapons safety posture, the weapons control status, and recognition markings. Unit locations displayed on FBCB2 greatly assist preventive measures; however, because dismounted scouts are not displayed, the commander must constantly monitor the position of dismounted squads to distinguish between friendly and threat soldiers. Knowledge and employment of applicable ROE are the primary means of preventing noncombatant casualties.

PLAN FOR EXTREME LIMITED VISIBILITY CONDITIONS

5-74. At night, limited visibility fire control equipment enables the troop to engage threat forces at nearly the same ranges that are applicable during the day. Obscurants such as dense fog, heavy smoke, and blowing sand, however, can reduce the capabilities of thermal and infrared equipment. The commander should therefore develop contingency plans for such limited visibility conditions. Although decreased acquisition capabilities have minimal effect on area fire, point target engagements will likely occur at decreased ranges. Typically, firing positions, whether offensive or defensive, must be adjusted closer to the area or point where the commander intends to focus fires. Another alternative is the use of visual or infrared illumination when there is insufficient ambient light for passive light intensification devices.

DEVELOP CONTINGENCIES FOR DIMINISHED CAPABILITIES

5-75. Leaders initially develop plans based on their units' maximum capabilities. They make backup plans for implementation in the event of casualties or weapon damage or failure. While leaders cannot anticipate or plan for every situation, they should develop plans for what they view as the most probable occurrences. Building redundancy into these plans, such as having two systems observe the same sector, is an invaluable asset when the situation (and the number of available systems) permits. Designating alternate sectors of fire provides a means of shifting fires if adjacent elements are destroyed.

ENGAGEMENT AREA DEVELOPMENT

5-76. The commander plans to defeat or destroy a threat force using the massed fires of all available weapons in engagement areas. The success in any engagement depends on how effectively the commander

can integrate the obstacle, indirect fire, and direct fire plans within the engagement area to achieve the unit's tactical purpose.

5-77. At the troop level, EA development is a complex function, demanding parallel planning and preparation if the troop is to accomplish the myriad tasks for which it is responsible. Despite this complexity, however, EA development resembles a drill in that the commander and his subordinate leaders use an orderly, fairly standard set of procedures. Beginning with evaluation of METT-TC factors, the development process covers these steps:

- Identify all likely threat avenues of approach.
- Determine likely threat schemes of maneuver.
- Determine where to kill the threat.
- Plan and integrate obstacles.
- Emplace weapon systems.
- Plan and integrate indirect fires.
- Rehearse the execution of operations in the engagement area.

IDENTIFY LIKELY THREAT AVENUES OF APPROACH

5-78. The following procedures and considerations apply in identifying the threat's likely avenues of approach (see also Figure 5-5):

- Conduct initial reconnaissance. If possible, do this from the threat's perspective along each avenue of approach into the AO or EA.
- Identify key terrain. This includes locations that afford positions of advantage over the threat as well as natural obstacles and/or choke points that restrict forward movement.
- Determine which avenues of approach afford cover and concealment for the threat while allowing it to maintain its tempo.
- Determine the reconnaissance and company/battalion avenues of approach, to include mounted and dismounted avenues.
- Evaluate lateral routes adjoining each avenue of approach.

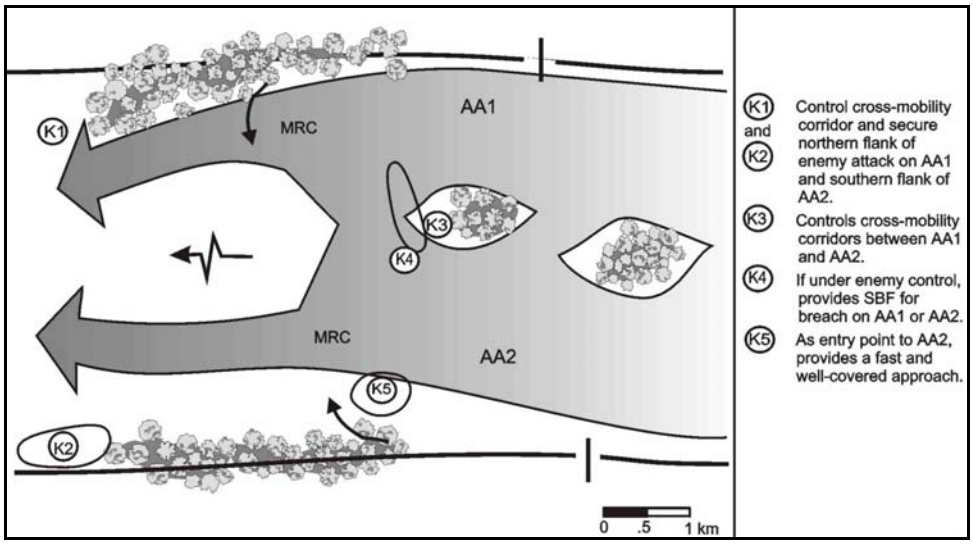

AA1
MRC
K1
K3
K4
MRC
AA2
K5
K2
0 .5 1 km
K1 and K2 Control cross-mobility corridor and secure northern flank of enemy attack on AA1 and southern flank of AA2.
K3 Controls cross-mobility corridors between AA1 and AA2.
K4 If under enemy control, provides SBF for breach on AA1 or AA2.
K5 As entry point to AA2, provides a fast and well-covered approach.

Figure 5-5. Identify All Likely Threat Avenues of Approach

DETERMINE THE THREAT SCHEME OF MANEUVER

5-79. The troop's higher headquarters depicts the feasible threat courses of action through situation templates developed during IPB. The troop commander must apply this information to his AO, using the following procedures and considerations to further define the threat's actions at platoon and section levels as necessary (see also Figure 5-6):

- Determine how the threat might structure the attack in the troop's AO for each course of action.
- Determine how the threat might use and move his reconnaissance assets to achieve his reconnaissance objective. Identify correlations between possible threat reconnaissance and different courses of action.
- Determine where and when the threat might change formations and/or establish support-by-fire (SBF) positions.
- Determine where, when, and how the threat might conduct breaching operations and its assault.
- Determine where and when the threat might commit follow-on forces.
- Determine the threat's expected rates of movement.
- Assess the effects of the threat's combat multipliers.
- Determine what reactions the threat is likely to have in response to projected friendly actions.

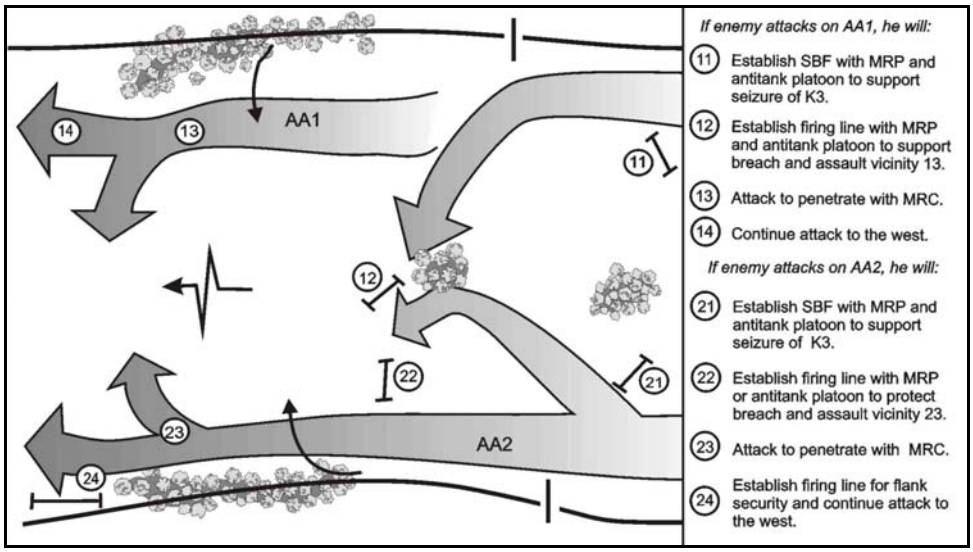

AA1
AA2
14
13
11
12
22
21
23
24
If enemy attacks on AA1, he will:
11 Establish SBF with MRP and antitank platoon to support seizure of K3.
12 Establish firing line with MRP and antitank platoon to support breach and assault vicinity 13.
13 Attack to penetrate with MRC.
14 Continue attack to the west.
If enemy attacks on AA2, he will:
21 Establish SBF with MRP and antitank platoon to support seizure of K3.
22 Establish firing line with MRP or antitank platoon to protect breach and assault vicinity 23.
23 Attack to penetrate with MRC.
24 Establish firing line for flank security and continue attack to the west.

Figure 5-6. Determine the Threat's Scheme of Maneuver

DETERMINE WHERE TO KILL THE THREAT

5-80. The commander identifies the best locations to kill the threat (see Figure 5-7). It may be an area where several avenues of approach come together, or a spot where several branch from one avenue. The commander considers the following:

- Identify target reference points (TRP) that match the threat's feasible courses of action, allowing the troop to identify where it will engage threat forces through the depth of the AO.
- Identify and record the exact location of each TRP.
- Determine how many weapon systems will focus fires on each TRP to achieve the desired end state.
- Determine which platoons will mass fires on each TRP.
- Establish engagement areas around TRPs.
- Develop the direct fire planning measures necessary to focus fires at each TRP.

NOTE: In marking TRPs, use thermal sights to ensure visibility at the appropriate range under varying conditions, including daylight and limited visibility (darkness, smoke, dust, or other obscurants).

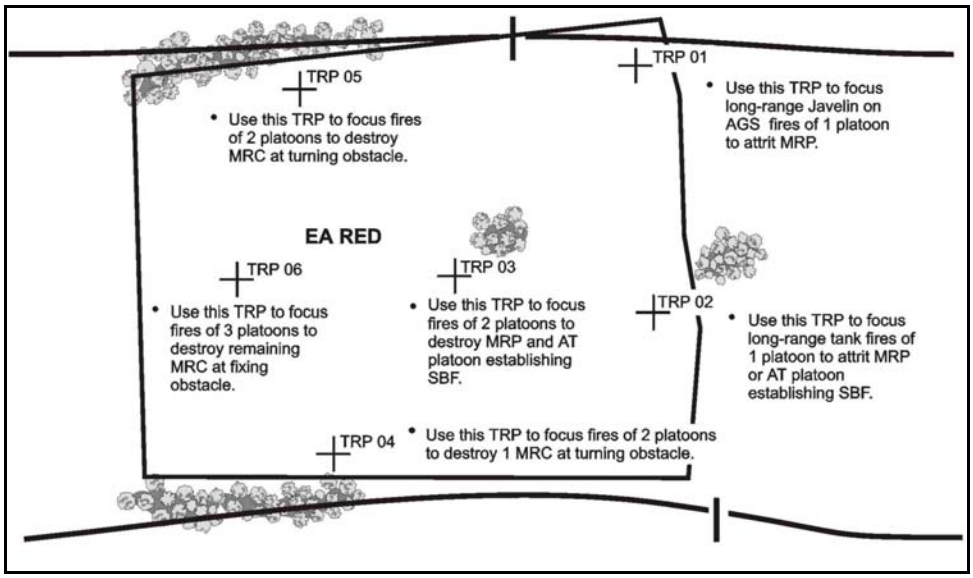

TRP 05
• Use this TRP to focus fires of 2 platoons to destroy MRC at turning obstacle.
TRP 01
• Use this TRP to focus long-range Javelin on AGS fires of 1 platoon to attrit MRP.
EA RED
TRP 06
• Use this TRP to focus fires of 3 platoons to destroy remaining MRC at fixing obstacle.
TRP 03
• Use this TRP to focus fires of 2 platoons to destroy MRP and AT platoon establishing SBF.
TRP 02
• Use this TRP to focus long-range tank fires of 1 platoon to attrit MRP or AT platoon establishing SBF.
TRP 04
• Use this TRP to focus fires of 2 platoons to destroy 1 MRC at turning obstacle.

Figure 5-7. Determine Where to Kill the Threat

PLAN AND INTEGRATE OBSTACLES

5-81. The higher headquarters provides the troop with the obstacle intent and Class IV/V barrier requirements. The troop commander with the engineer platoon leader is responsible for siting these obstacles to accomplish the intent within its engagement areas (see Figure 5-8). The commander may augment the obstacle plan with hasty protective obstacles. The exact location of all obstacles should be identified by elements using their optics, to include night vision devices (NVD), and weapon systems from their fighting positions. The commander considers the following steps:

- In cooperation with the engineer platoon leader, identify, site, and mark tactical obstacles and protective obstacles.
- Ensure coverage of all obstacles with direct fires.
- Assign responsibility for guides and lane closure, as required.
- Ensure guides fully understand lane closure or situational obstacle employment criteria.
- Provide security for the engineer elements while emplacing the obstacles.
- Assign an element responsibility for obstacle security to defeat threat attempts at breaching prior to the decisive engagement.

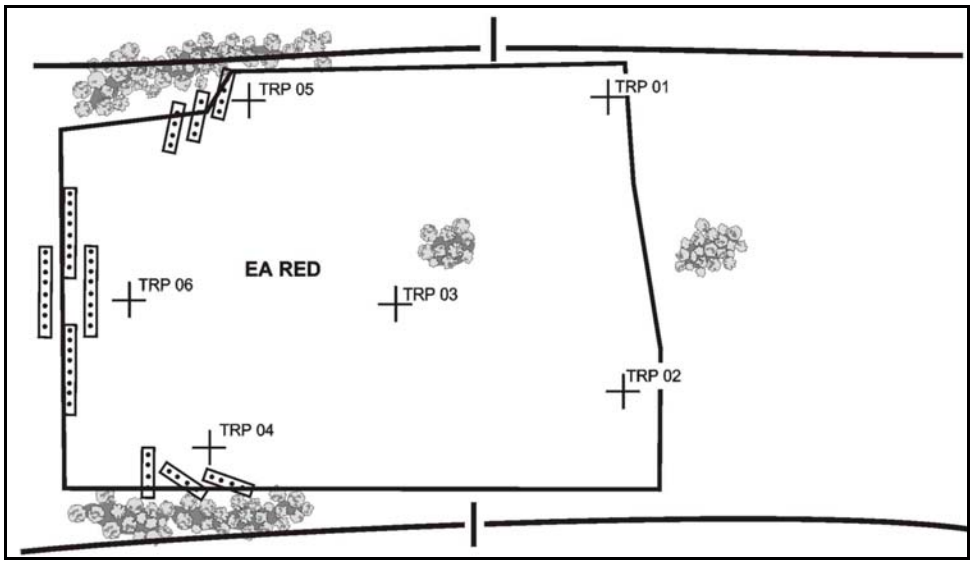


Figure 5-8. Plan and Integrate Obstacles

PLAN DIRECT FIRES AND EMPLACE WEAPON SYSTEMS

5-82. To successfully bring direct fires against a threat force, the commander and subordinate leaders must continuously apply the principles of fire control (see Figure 5-9). Direct fire plans must ensure rapid, accurate target acquisition and the massing of fire to achieve decisive effects on the target. The direct fire plan must describe the following, as a minimum:

- Where and how to mass (focus and distribute) fire effects.
- Where and how to orient forces to speed target acquisition.
- How and when to shift fires to refocus or redistribute their effects.

5-83. Based on his estimate of the situation, the commander decides where and when he wants to mass fire effects within his concept of the operation. The commander develops control measures around and within the engagement areas.

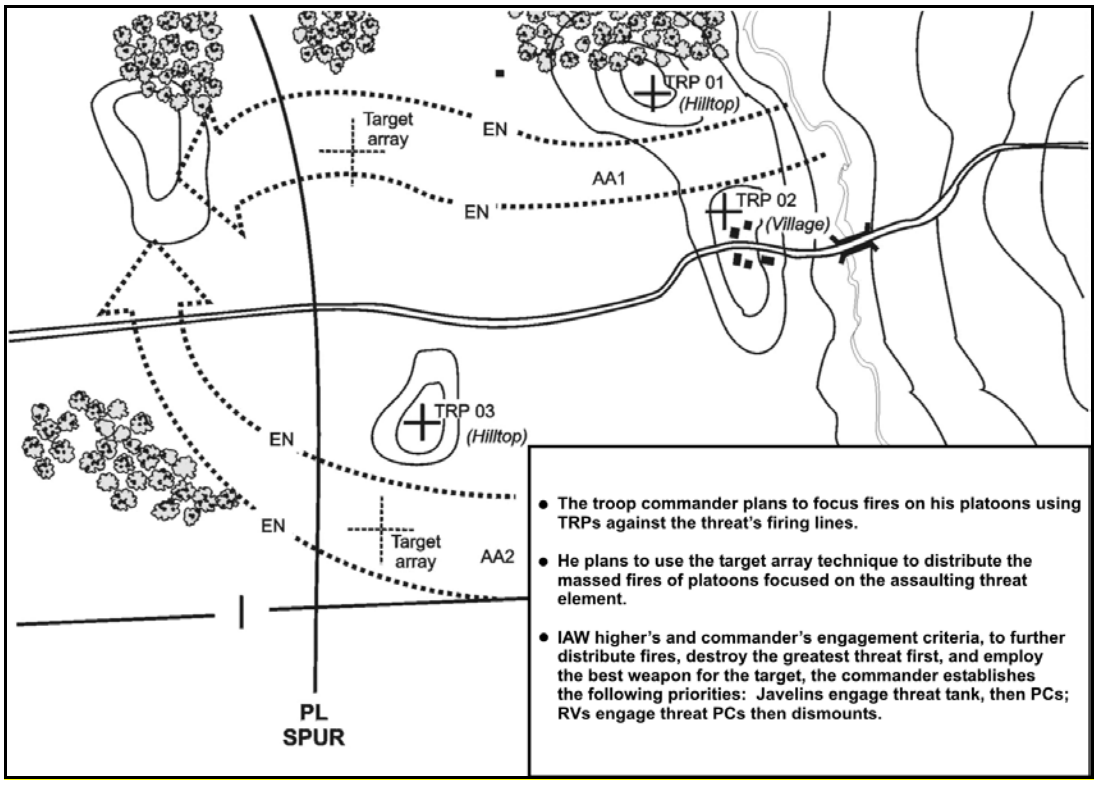

TRP 01
(Hilltop)
Target
array
EN
AA1
EN
TRP 02
(Village)
TRP 03
(Hilltop)
EN
EN
Target
array
AA2
PL
SPUR
• The troop commander plans to focus fires on his platoons using TRPs against the threat's firing lines.
• He plans to use the target array technique to distribute the massed fires of platoons focused on the assaulting threat element.
• IAW higher's and commander's engagement criteria, to further distribute fires, destroy the greatest threat first, and employ the best weapon for the target, the commander establishes the following priorities: Javelins engage threat tank, then PCs; RVs engage threat PCs then dismounts.

Figure 5-9. Example of Determining Where and How to Mass (Focus and Distribute) Fire Effects to Kill the Threat

ORIENT FORCES TO SPEED TARGET ACQUISITION

5-84. The troop must rapidly and accurately acquire threat elements to effectively engage with direct fires. Orienting friendly forces on probable threat locations and likely avenues of approach will speed target acquisition. To achieve this critical orientation, the commander typically designates TRPs within engagement areas and on avenues of approach. He then orients his subordinate elements using directions of fire or sectors of fire. Normally, the gunners on crew-served weapons scan the designated direction, sector, or area while other crewmembers observe alternate sectors or areas to provide all-around security. Figure 5-10 illustrates how the commander orients the troop for quick, effective acquisition of the threat force.

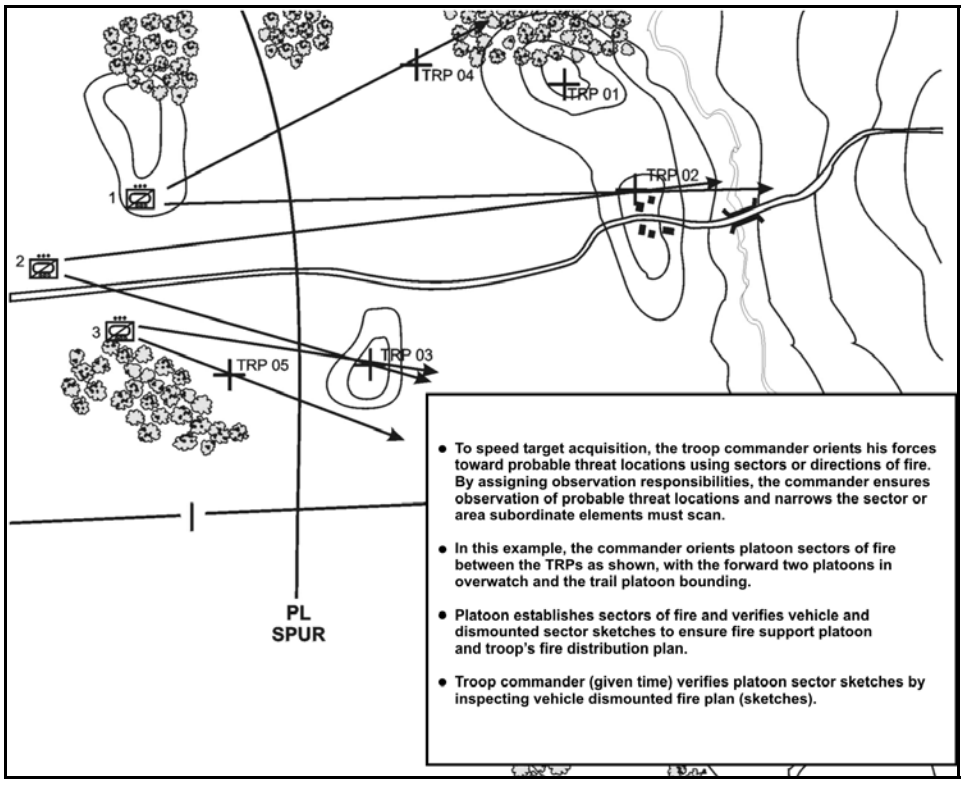

TRP 04
TRP 01
TRP 02
1
2
3
TRP 05
TRP 03
PL
SPUR
• To speed target acquisition, the troop commander orients his forces toward probable threat locations using sectors or directions of fire. By assigning observation responsibilities, the commander ensures observation of probable threat locations and narrows the sector or area subordinate elements must scan.
• In this example, the commander orients platoon sectors of fire between the TRPs as shown, with the forward two platoons in overwatch and the trail platoon bounding.
• Platoon establishes sectors of fire and verifies vehicle and dismounted sector sketches to ensure fire support platoon and troop's fire distribution plan.
• Troop commander (given time) verifies platoon sector sketches by inspecting vehicle dismounted fire plan (sketches).

Figure 5-10. Example of Orienting Forces to Speed Target Acquisition

SHIFT FIRES TO REFOCUS AND REDISTRIBUTE

5-85. The commander envisions the fight, and integrates techniques or procedures to shift fires and redistribute the effects into the plan (see Figure 5-11). The commander applies the same techniques and fire control measures that were initially used to focus and distribute fires, and considers a variety of situations for shifting fires:

- Appearance of a threat force posing a greater threat than the one currently being engaged.
- Extensive attrition of the threat force being engaged, creating the possibility of target overkill.
- Attrition of friendly elements that are engaging the threat force.
- Change in the ammunition status of the friendly elements that are engaging the threat force.
- Maneuver of threat or friendly forces resulting in terrain masking.
- Increased fratricide risk as a maneuvering friendly element closes with the threat force being engaged.

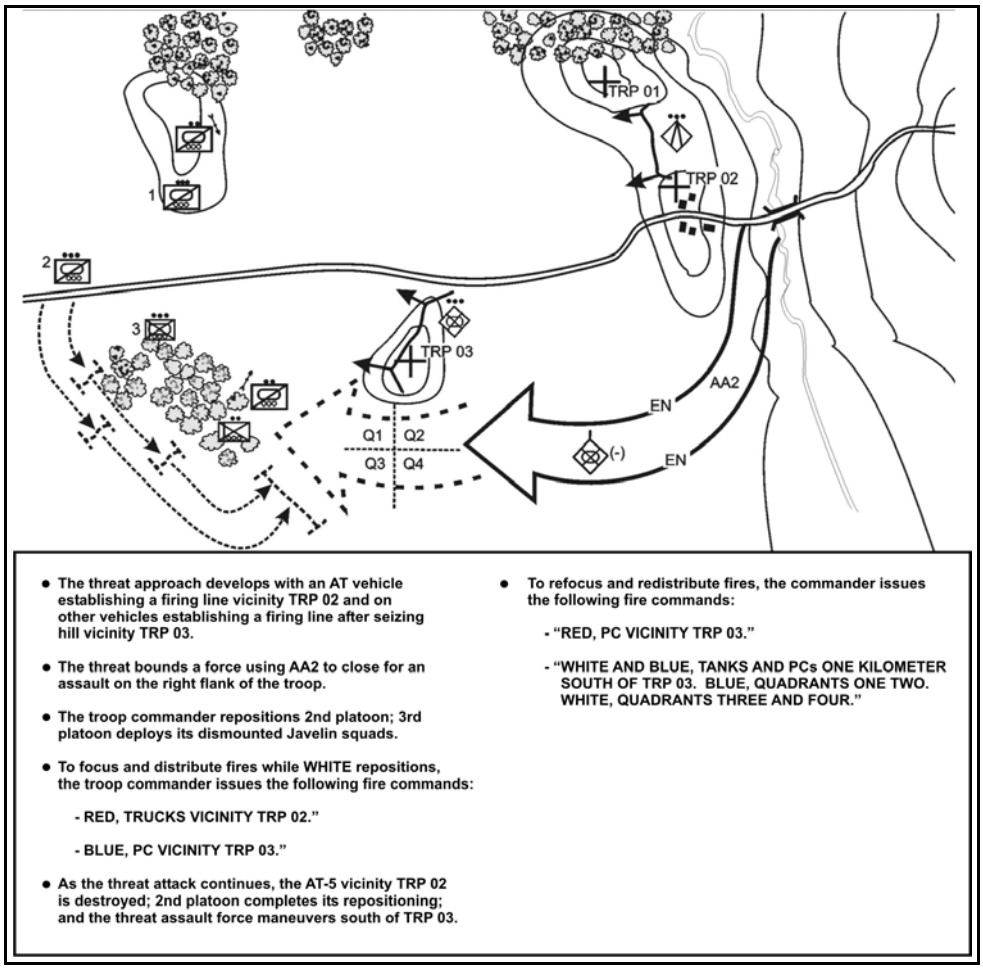

TRP 01
TRP 02
TRP 03
1
2
3
AA2
EN
EN
(-)
Q1
Q2
Q3
Q4
• The threat approach develops with an AT vehicle establishing a firing line vicinity TRP 02 and on other vehicles establishing a firing line after seizing hill vicinity TRP 03.
• The threat bounds a force using AA2 to close for an assault on the right flank of the troop.
• The troop commander repositions 2nd platoon; 3rd platoon deploys its dismounted Javelin squads.
• To focus and distribute fires while WHITE repositions, the troop commander issues the following fire commands:
- RED, TRUCKS VICINITY TRP 02."
- BLUE, PC VICINITY TRP 03."
• As the threat attack continues, the AT-5 vicinity TRP 02 is destroyed; 2nd platoon completes its repositioning; and the threat assault force maneuvers south of TRP 03.
• To refocus and redistribute fires, the commander issues the following fire commands:
- "RED, PC VICINITY TRP 03."
- "WHITE AND BLUE, TANKS AND PCs ONE KILOMETER SOUTH OF TRP 03. BLUE, QUADRANTS ONE TWO. WHITE, QUADRANTS THREE AND FOUR."

Figure 5-11. Example of Shifting to Refocus and Redistribute Fires

5-86. Weapon systems are emplaced in conjunction with siting obstacles. The commander selects tentative platoon positions based on observation and fields of fire, effective ranges, and tentative targets. Weapons systems should be placed to engage from the flanks when at all possible. The commander and his subordinate leaders consider the following in selecting and improving BPs and emplacing vehicles, crew-served weapon systems, and dismounted scout positions:

- Select tentative platoon BPs. When possible, select these while reconnoitering the EA. Using the threat's perspective enables the commander to assess survivability of the positions.
- Conduct a leader's reconnaissance of the tentative BPs.
- Confirm and mark the selected BPs.
- Ensure that BPs do not conflict with those of adjacent units and that they are effectively tied in with adjacent positions.
- Select primary, alternate, and supplementary fighting positions to achieve the desired effect for each TRP.

- Ensure that platoon leaders, platoon sergeants (PSG), vehicle commanders, and/or dismounted scout squad leaders position weapon systems so that each TRP is effectively covered by the required number of weapons, vehicles, and/or platoons.
- Ensure that positions allow vehicle commanders, loaders, and/or gunners (as applicable for each vehicle) to observe the engagement area from the turret-down position and engage threat forces from the hull-down position.
- Stake vehicle positions in accordance with unit SOP so engineers (when augmented) can dig in the positions while vehicle crews perform other tasks.
- Proof all vehicle positions.
- Locate hide positions. Mark and time routes from hide positions to the BP. Ensure the hide is positioned within the time space required to set the BP from the last possible identification of the threat entering the sector.

PLAN AND INTEGRATE INDIRECT FIRES

5-87. The commander, with assistance from the FSO, completes his fire plan by integrating the effects of indirect fires with his direct fire and obstacle plans (see Figure 5-12). The commander considers the following in planning and integrating indirect fires:

- Determine the purpose of fires and develop a fire support plan that supports the brigade's EFSTs.
- Determine where and when that purpose will achieve the best results.
- Establish the observation plan, with redundancy for each target. Observers will include the FIST as well as members of maneuver elements with fire support responsibilities (such as PSGs).
- Establish triggers based on threat movement rates. Mark triggers and ensure that observers understand the engagement criteria for each target set. (**NOTE:** It is more important for the observers to see the trigger than the target location.)
- Obtain accurate target locations using survey and/or navigational equipment.
- Refine target locations to ensure coverage of obstacles.
- Adjust artillery and mortar targets.
- Plan final protective fires.
- Request critical friendly zones for protection of maneuver elements and no fire areas for protection of OPs and forward positions.

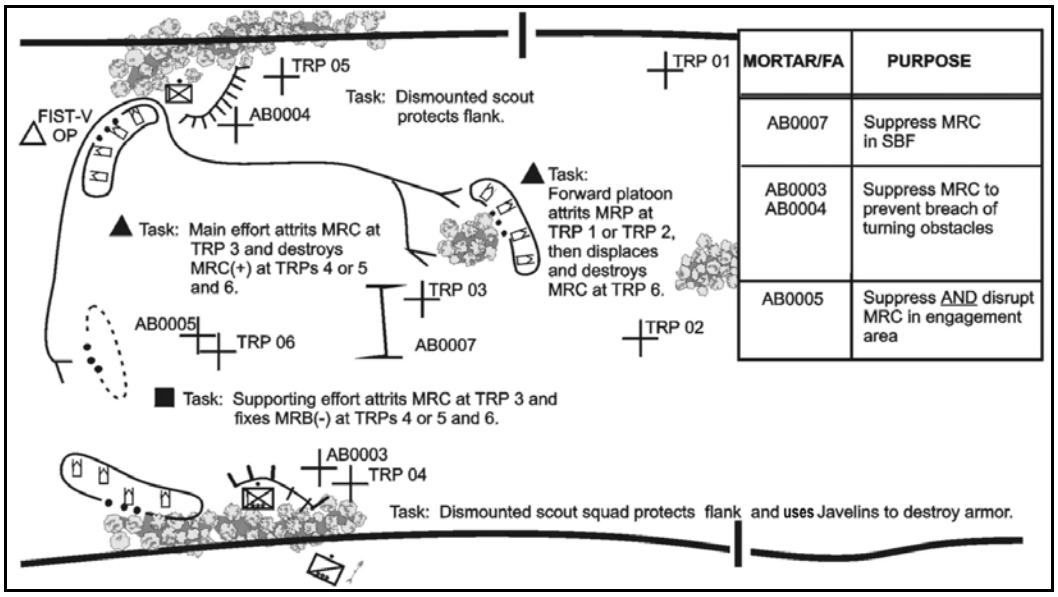

TRP 05
TRP 01
Task: Dismounted scout protects flank.
FIST-V OP
AB0004
Task: Forward platoon attrits MRP at TRP 1 or TRP 2, then displaces and destroys MRC at TRP 6.
Task: Main effort attrits MRC at TRP 3 and destroys MRC(+) at TRPs 4 or 5 and 6.
TRP 03
AB0005
TRP 06
AB0007
TRP 02
Task: Supporting effort attrits MRC at TRP 3 and fixes MRB(-) at TRPs 4 or 5 and 6.
AB0003
TRP 04
Task: Dismounted scout squad protects flank and uses Javelins to destroy armor.
MORTAR/FA
PURPOSE
AB0007
Suppress MRC in SBF
AB0003 AB0004
Suppress MRC to prevent breach of turning obstacles
AB0005
Suppress AND disrupt MRC in engagement area

Figure 5-12. Plan and Integrate Indirect Fires with Direct Fires

REHEARSE THE ENGAGEMENT

5-88. The troop may use various rehearsals for engaging threat forces within the EA. The platoons may rehearse engagement techniques and direct fire control during battle drill rehearsals. The commander leads a combined arms rehearsal to ensure that subordinate leaders and soldiers can cover their assigned areas, acquire targets, and execute direct and indirect fires. The rehearsal should cover these actions:

- Rearward passage of security forces, as required.
- Closure of lanes, as required.
- Movement from the hide position to the BP.
- Use of fire commands, triggers, and/or maximum engagement lines to initiate direct and indirect fires.
- Shifting of fires to refocus and redistribute fire effects.
- Preparation and transmission of critical reports using FM and digital systems, as applicable.
- Assessment of the effects of threat weapon systems.
- Displacement to alternate, supplementary, or successive OPs/BPs.
- Cross-leveling or resupply of Class V.
- Evacuation of casualties.

NOTE: The troop commander should coordinate the troop rehearsal with its higher headquarters to ensure its rehearsals are not planned for the same time and/or location.

SECTION IV - TARGET ACQUISITION

5-89. Target acquisition is the detection, identification, and location of a target to permit the effective employment of weapons. The process itself is inherent in all reconnaissance and security operations and may be an objective or a focus of a reconnaissance mission. As in reconnaissance, the higher headquarters uses a mix of assets to cue the troop in gaining ground observation. The mix of assets available to the higher headquarters includes—

- OH-58D helicopters.
- UAV.
- COLTs.
- FISTs.
- Scouts.
- AN/TPQ-36 and AN/TPQ-37 radars.
- PROPHETs.

5-90. The troop may perform target acquisition in support of the higher commander's EFSTs, or to attack high pay-off targets listed within the attack guidance matrix (AGM). The troop is required to detect and identify those targets specified in the higher headquarters order and in accordance with the higher commander's intent for fire support. The troop must maintain observation of the specified targets until the desired effect is achieved through lethal or nonlethal fires, or it completes reconnaissance handover to another unit. The troop provides battle damage assessment within its capabilities and may recommend additional attacks to meet the higher commander's desired effect as necessary.

5-91. The BRT commander or XO may participate in the target value analysis conducted by the BCT battle staff. The commander should be prepared to advise the staff on the capabilities and probabilities of troop assets acquiring high pay-off and other targets based on his analysis of METT-TC. He may recommend what troop assets be used to support EFSTs or attack targets from the AGM.

5-92. During his troop-leading procedures, the commander must link the designated targets and desired effects to the higher commander's reconnaissance and/or security guidance. He must consider the effects of terrain and weather on his capabilities to detect, identify, track, and designate (paint) targets for attack. The commander should address the following within his order:

- The relation between his reconnaissance focus, tempo, and engagement criteria and the higher commander's EFSTs and AGM.
- Maneuvering or positioning elements to acquire targets.
  - Integration and cuing by external ISR assets.

  - Mounted and/or dismounted OPs to observe NAIs, TAIs, and preplanned targets.
  - If available, COLTs deployed to execute fires throughout the depth of the AO.
- Instructions for target acquisition, to include:
  - Target description and method of engagement.
  - Criteria to transition from surveillance to target designation.
  - Trigger description to initiate engagement.
  - Purpose and desired target effect.
  - Coordination or procedures for reconnaissance and/or targeting handover to other elements.

5-93. The XO assists the commander in coordinating target acquisition and attack to ensure fire missions meet the higher commander's purpose for fires. He coordinates for UAV or other aerial reconnaissance support based on electronic signatures or the collection plan and the implementation of protective fire control measures as necessary. The XO may recommend alternate fire support means of attack if the preferred weapon and/or munitions are not available, or close air support is late or diverted. He monitors on-going battle damage assessment and recommends continued or revised attacks to achieve the desired effect.

5-94. During operations the troop CP assists the commander in controlling acquisition and reconnaissance handover between elements. The CP assesses information and intelligence from higher headquarters providing high pay-off and other target signatures and cues from assets such as PROPHET, MASINT, and IMINT. The CP assists the commander in identifying and tracking all friendly forces operating within the troop AO and ensures that the higher headquarters fire support element has accurate locations of these elements. It monitors reports and FBCB2 to confirm primary or alternate triggers of attacks, and consolidates SPOTREPs to forward exact battle damage assessment to the higher headquarters.

SECTION V - ASSEMBLY AREAS

5-95. An assembly area (AA) is an area the troop occupies to prepare for further action. The troop may occupy an AA independently or as part of the squadron or mounted BCT. AA activities include order preparation and issue, vehicle maintenance and repair, resupply operations, and rest. AAs are positioned out of range of threat light artillery.

5-96. Within the area available to the troop, leaders should conduct a map reconnaissance, and if time is available, an advance party should conduct a ground reconnaissance. The troop SOP should have a standard AA occupation drill and layout.

QUARTERING PARTY ACTIVITIES

5-97. The quartering party must maintain digital (FBCB2) and voice communications with the troop CP. Prior to quartering party movement, quartering party vehicles display the automated operations overlay on their tactical displays. This overlay typically includes the movement route, waypoints, specific critical points, and the AA. Additional control measures, such as contact points, coordination points, observation points, and screen lines, may be included to enhance control and/or security. If fire support, obstacle, and threat overlays are also available, quartering party members should study and store these in their FBCB2.

5-98. During movement, the quartering party leader passes critical information to the troop CP via FBCB2 or FM voice. The quartering party annotates changes to the published route on the FBCB2 overlays and updates the troop CP by forwarding overlay updates.

5-99. Normally, the XO or 1SG will lead the quartering party into the AA. When the quartering party arrives at the forward AA, they must—

- Reconnoiter the area. If the area is not suitable, report immediately and provide recommendations.
- Organize the area. Select locations for all elements of the troop based on the commander's instructions or as terrain, cover, and concealment dictate. Select general locations for vehicles. Vehicle commanders and the chain of command refine these positions when they arrive.
- Improve and mark entrances, exits, and internal routes.
- Update the overlay to reflect any changes in the location of the assembly area and any obstacles encountered.
- Perform guide duties as required. Platoon representatives guide their elements into position after clearing the RP.

MOVEMENT AND OCCUPATION

5-100. The main body begins movement to the AA with an updated digital overlay obtained from the quartering party. Upon reaching the RP, the troop quickly moves into their assigned positions, without slowing or halting, using platoon guides or established drills. Color-coded lights can be used to link up guides and lead vehicles for those elements that are not FBCB2-equipped.

SECURITY

5-101. Although the AA is not a defensive position, the area's perimeter must be secured to detect and defeat threat ground attacks. The commander assigns specific sectors of responsibility to subordinate elements based on weapons systems capabilities and METT-TC. The troop uses both passive and active security measures. This is accomplished by—

- Posting guards at all entrances and exits to stop traffic that tries to enter the area.
- Establishing OPs to observe key terrain features and likely avenues of approach for early warning of threat approach.

- Providing overlapping observation and fires within platoons and with flank platoons. Once each platoon of the troop has occupied its perimeter defensive position, the platoons will digitally transmit their respective sector sketches to the troop XO for consolidation into the troop sector sketch.
- Organizing a quick reaction force to defeat penetrations of the perimeter.
- Establishing dismounted patrol plans.
- Camouflaging vehicles and equipment to prevent threat detection from the ground and air.
- Emplacing NBC alarms upwind (or in a 360-degree perimeter) and no more than 150 meters from the troop's positions to provide early warning of an NBC attack.

READINESS CONDITION LEVELS

5-102. The troop maintains the appropriate REDCON while occupying an AA. Each REDCON level indicates critical tasks and time available to prepare for future operations. The unit SOP may establish additional REDCON levels based on METT-TC factors.

- REDCON 1 (be prepared to move immediately).
  - All personnel alert and ready for action.
  - Vehicles loaded and secured, and weapons manned.
  - Vehicle engines running and OPs recalled.
- REDCON 2 (be prepared to move in 15 minutes).
  - All personnel alert and ready for action.
  - Vehicles loaded and secured, and weapons manned.
  - OPs manned or scouts dismounted with wire or alternate communications.
- REDCON 3 (be prepared to move in half an hour).
  - Fifty percent of each crew/squad stand down for rest, feeding, and maintenance.
  - Remaining 50 percent man vehicles, OPs, weapons, and monitor radios/phones.
- REDCON 4 (be prepared to move in one hour).
  - Two men per platoon make dismounted checks of platoon area.
  - One man per vehicle monitors radios/phones and mans turret weapon.

5-103. All personnel remain at 100 percent alert until the prioritized work is completed after entering the AA. Initiate the appropriate REDCON when the work is finished. As the time for execution of a mission nears, increase the REDCON in accordance with guidance from higher headquarters, achieving REDCON 1 before the troop must move.

ROUTINE TASKS

5-104. In addition to establishing security as outlined above, several tasks are routinely accomplished in an AA. These tasks should be listed in the troop SOP under priority of tasks upon arrival in an AA. Subordinates must know how long the troop will remain in the AA and any special requirements. Common AA tasks include—

- Prepare fire plan, to include indirect fires.
- Establish communications. The troop must ensure that all communications links (i.e., digital and voice) are maintained. Backup means of communication (messenger and landline) are emplaced as opportunity, time, and equipment permit.
- Maintain radio watch and man crew-served weapons.
- Prepare protective obstacle plan.
- Select alternate and supplementary positions.
- Reconnoiter routes of withdrawal.
- Perform preventive maintenance checks and services (PMCS).
- Continue to improve positions.
- Conduct logistics resupply (Classes I, III, and V).
- Prepare for future operations to include combat training, rehearsals, weapons test-fire, precombat checks, and precombat inspections.
- Rest in accordance with REDCON status.

SECTION VI - RELIEF IN PLACE

5-105. A relief is an operation in which a unit is replaced by another unit. The incoming unit assumes responsibility for the mission and is assigned a position or AO. A relief in place may be conducted during reconnaissance, security, stability, support, offensive or defensive operations during any weather or light conditions. During combat, they are normally executed during limited visibility to reduce the possibility of detection. During stability or support operations they may be conducted during daylight and at times that best fit the social environment (such as not during religious activities). FBCB2 enhances the planning and execution of relief operations by providing a complete common tactical picture of the AO. Prior to the actual contact between the incoming and outgoing units, the outgoing commander should provide digital overlays to the incoming commander outlining fire support; obstacles; threat situation; and primary, alternate, and supplementary friendly positions. Reconnaissance handover must be conducted to ensure all NAIs, TAIs, and relevant information sources are transitioned to the incoming unit.

5-106. A relief can be conducted for the following reasons:

- Reconstitute a unit that has sustained heavy losses.
- Decontaminate a committed unit.
- Rest a unit that has been in prolonged combat.

- Conform to a larger tactical plan.
- Assign a new mission to the relieved unit.
- Introduce a new unit into combat.

5-107. The troop may conduct a relief in place with another troop on a screen line, in a base camp, or during area security. When a maneuver unit relieves the troop, the differences in task organization are a prime consideration in determining the method of relief.

METHODS OF RELIEF IN PLACE

5-108. There are three basic methods of conducting a relief in place:

- One unit at a time.
- All units simultaneously.
- Occupying in-depth or adjacent positions.

ONE UNIT AT A TIME

5-109. Relieving one unit at a time is the most time-consuming, but secure method. Relief proceeds by platoon. Platoons are normally relieved in place with the relieving unit assuming the relieved unit's positions and missions. This method is most common when units have similar organizations or when occupied terrain must be retained. Subsequent to relief, the assuming unit makes adjustments to positions. The relieved units withdraw once they are relieved without waiting for other units. This method requires detailed planning and coordination.

ALL UNITS SIMULTANEOUSLY

5-110. Relieving units simultaneously is a variation of the first method. It is faster but less secure as all platoons are moving simultaneously. Close coordination is required to prevent congestion. Once command groups and combat trains are collocated, platoons move forward at the same time along designated routes. Relief occurs simultaneously at each location. Relieved units withdraw immediately upon relief. The withdrawing unit does not wait to form up company or troop march columns, but normally forms up at rally points behind the FEBA in platoon columns before moving out.

OCCUPYING IN-DEPTH OR ADJACENT POSITIONS

5-111. Relief by occupying positions in depth or adjacent to the relieved unit is considered an area relief. It is appropriate when units are dissimilar, when the relieving unit performs a different mission, or when improved defensive terrain is away from the line of contact. This method is also appropriate when the unit being relieved has been chemically or radiologically contaminated. When possible, the relieving unit should be able to place direct fires on the other unit's FSCMs. The relieved unit withdraws one platoon at a time or simultaneously and conducts a rearward passage of lines through the relieving troop, if appropriate.

5-112. In all three methods the normal sequence of relief is from rear to front. Overlap always occurs with the relieved unit maintaining communications, fire support, and positions until relieved. Due to the noncontiguous, dispersed, and decentralized operations of the mounted BCT or squadron, relief will most likely occur one troop or platoon at a time or by area relief with units withdrawing at different times.

PLANNING

5-113. The primary purpose for a relief in place is to maintain the combat effectiveness of committed elements. A relief in place should be conducted during a lull in combat, if possible. FBCB2 enables the commanders to build and share a complete picture of the area over which the incoming commander will assume control. As part of the planning, coordination, and synchronization process, the incoming and outgoing commanders should coordinate and provide the following:

- Updated friendly and threat situations.
- Impact of civilian considerations on the relief.
- Time for the relief to begin, and estimated time for completion that takes advantage of limited visibility.
- Sequence of relief, either sequential or simultaneous.
- Method of relief.
- Reconnaissance handover criteria and procedures.
- Locations of contact points, forward AAs, SPs, routes, RPs, and passage lanes.
- Locations of subordinate element OPs, battle or fighting positions, checkpoints, and/or roadblocks.
- Fire plans and sector sketches for vehicle fighting positions and/or crew-served weapons.
- Fire support plans, to include—
  - Assets available.
  - Critical friendly zones and no fire areas (NFA).
  - Preplanned targets.
  - Final protective fires.
  - Smoke targets.
- Locations of and procedures to transfer responsibility for obstacles.
- Locations or employment and purpose of ISR assets/elements working within the troop AO.
- Far- and near-range recognition signals.
- Locations and responsibilities of guides from the relieved unit.
- Actions on contact during the relief.
- CSS responsibilities and requirements, to include transfer of supplies and equipment between units.
- Collocation of command posts.
- Communications information, to include exchange of IP addresses, communications security, and signal operating instructions.

5-114. The outgoing commander briefs the incoming commander to ensure that the relieving unit is thoroughly familiar with the AO and existing plans of the relieved force. Additional coordination between the two units is normally effected through the exchange of a liaison, normally

the XO, who remains on site and provides assistance as needed until the incoming unit becomes familiar with overall operations. This facilitates information exchange and the command transition process. Additional face-to-face meetings and the sharing of digitized overlays and/or free-text messages between liaisons complement this process. The troop WARNO for a relief in place must specify, as a minimum, the time for commencing and completing the relief and the priorities for the routes involved.

SEQUENCE OF RELIEF

5-115. In determining the sequence of the relief, both commanders should consider—

- Subsequent mission of the unit conducting the relief.
- Strength and combat efficiency of the unit presently in place.
- Capability of the threat to detect and react against the relief.
- Characteristics of the AO.
- Communications architecture.

PASSAGE OF COMMAND

5-116. The circumstances under which the incoming commander assumes responsibility for the area must be clearly defined in the order. During the relief, the commander having responsibility for the area, mission, and terrain management will exercise OPCON over all subordinate units within his AO. Responsibility passes to the incoming commander normally when digital/FM communications that allow effective command and control have been established and in excess of 50 percent of all the units being relieved have been relieved.

RECONNAISSANCE

5-117. The troop commander and subordinate leaders of the incoming unit conduct a thorough daylight reconnaissance. The relieved force commander should initially select and transmit through FBCB2 at least two routes (ground or air), checkpoints, and contact points for the incoming unit. The incoming unit's reconnaissance element with the troop CP and trains should move to the relieved unit's location as soon as possible upon receiving the order from higher headquarters.

SECURITY

5-118. The conduct of a relief in place must be accomplished by the most covert means possible to prevent the threat from learning that a relief is taking place. The following security measures should be taken:

- Restrictions on the size of advance parties and reconnaissance parties must be enforced.
- Communications during the relief are conducted digitally to the maximum extent possible. A common FM voice net must be established between the two forces.
- Operations security (OPSEC) is enforced throughout the operation.

MOVEMENT CONTROL

5-119. Strict movement procedures must be established and coordinated between the incoming and outgoing units. The movement along the routes will be tracked through FBCB2, giving the commanders positive control and a common picture of the movement of both units. Coordination between units can be extensively executed through the sharing of digital overlays. Information must include the following:

- Routes and checkpoints to be used and priorities for their use.
- Responsibility for traffic control.
- Location of assembly areas.
- Common use of transportation.
- Unit maintenance collection point (UMCP) locations and responsibilities.
- Aid stations and/or hospitals.

5-120. Units conducting a relief in place also share mobility information via digitized means or acetate overlays. If terrain and the road network allow, relieved units should be assigned separate routes and assembly areas to reduce congestion and to minimize concentration of units.

SECTION VII - PASSAGE OF LINES

5-121. A passage of lines passes one unit through the positions of another when the situation does not permit the unit to bypass the other. Passages are designated forward or rearward and may be conducted during offensive, defensive, stability, or support operations. The troop is particularly vulnerable during a passage of lines. The passing unit may be concentrated and the fires of the stationary unit may be temporarily masked. The troop normally conducts a passage of lines as part of a larger operation such as:

- Forward passage to initiate reconnaissance or flank screen.
- Rearward passage at the conclusion of a security mission.

KEY TASKS

5-122. Passing unit key tasks include—

- Establish digital and voice communications with the stationary unit. Enter the command, intelligence, and fire support nets.
- Collocate CPs in accordance with the passage timetable.
- Continuously report the following to the stationary unit:
  - Current threat activity (i.e., location, size, and composition).
  - Friendly activity (i.e., location, size, and activity of subordinate combat, CS, and CSS elements).

- Send an order with an FBCB2 overlay to each subordinate unit specifying where they will physically coordinate passage with the stationary unit.
- Dispatch representatives to assigned contact points and coordinate passage for their units. At the contact point, confirm recognition signals and exchange required information.
- Display correct recognition signals and use correct challenge and password as specified in the SOI during passage.
- Maintain proper vehicle spacing and weapons orientation.

5-123. Stationary unit key tasks include—

- Establish digital or voice communications with the passing unit.
- Ensure contact points are manned and subordinate commanders have personal communications with their representatives.
- Ensure representatives at the contact point—
  - Assign each passing unit a passage point into the AO and a route that extends from the passage points to the rear boundary or to an assembly area (defensive operations).
  - Exchange required information with the passing unit. If security forces are employed, position them along the battle handover line (BHL) to observe threat avenues of approach.
- Ensure routes through obstacles are clearly marked and physically controlled by guides, or provide an escort to the passing unit.
- Ensure routes of withdrawal are unobstructed and facilitate rapid movement to the release point (defensive operations).
- Ensure routes of advance, attack positions, and routes to the BHL are unobstructed and permit rapid movement (offensive operations).
- Provide CS and CSS as required or within capabilities.

GRAPHIC CONTROL MEASURES

5-124. Control measures normally used in a reconnaissance handover and passage of lines include the following:

- **Assembly area.** An assembly area in the rear area of the stationary unit allows the passing unit to conduct hasty reorganization and emergency CSS actions. This assembly area is temporary in nature.
- **Reconnaissance handover line.**
- **Passage points.** Passage points should be concealed from threat observation. Stationary unit guides may meet the passing unit at the passage point.

- **Passage lanes.** Passage lanes, established by the stationary unit, allow the passing unit to move quickly and uniformly through the stationary unit's AO. This could include passing through gaps in friendly obstacles and moving near friendly engagement areas. The passage lane begins at the passage point and ends at the rear of the stationary unit positions. The passage is considered complete when the moving unit exits the lanes.
- **Passage routes.** Routes are not as restrictive as lanes. Routes allow a passing unit to move more rapidly through the stationary unit area. If a passage route is used in conjunction with a passage lane, it begins where the passage lane ends. The number of lanes/routes designated will vary based on METT-TC considerations, but as a general rule, multiple lanes/routes should be planned to facilitate the rapid passage of the moving units and to avoid unnecessary massing of units. The stationary unit may escort the passing unit along the lane/route.
- **Release points.** A release point is a well-defined point on a route at which the elements composing a march column return under the authority of their respective commanders. Each one of these elements continues its movement toward its own appropriate destination.
- **Infiltration points.** Units should plan infiltration points for personnel not able to complete the passage with the unit. The passing unit's liaison officers (LNO) may remain located with stationary unit CPs to serve as a point of contact for infiltrating personnel/equipment. The key is that personnel attempting to infiltrate must have some way of contacting the stationary unit prior to attempting to cross into friendly territory.

5-125. Figure 5-13 and Figure 5-14 show the graphic control measures that support reconnaissance handover and rearward and forward passage of lines.

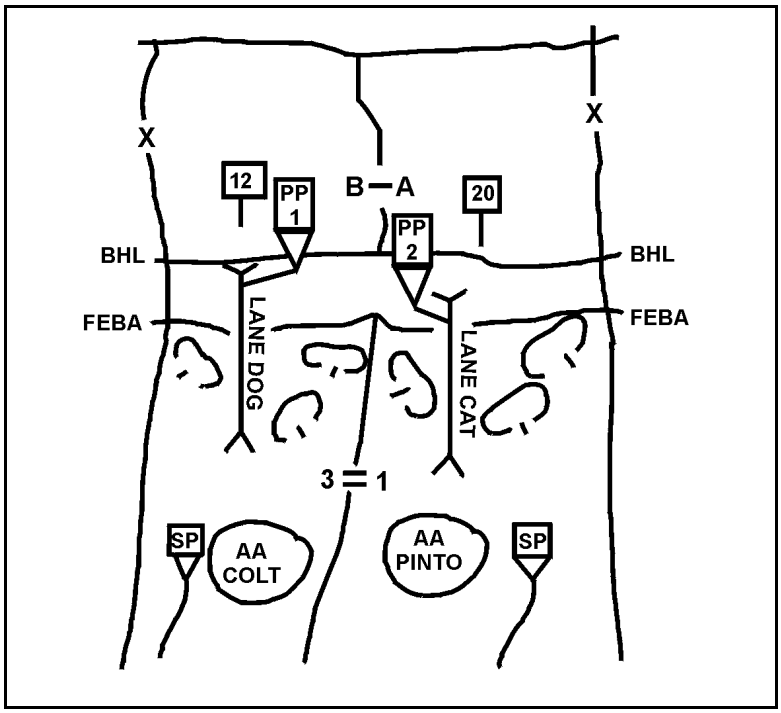


Figure 5-13. Rearward Passage of Lines

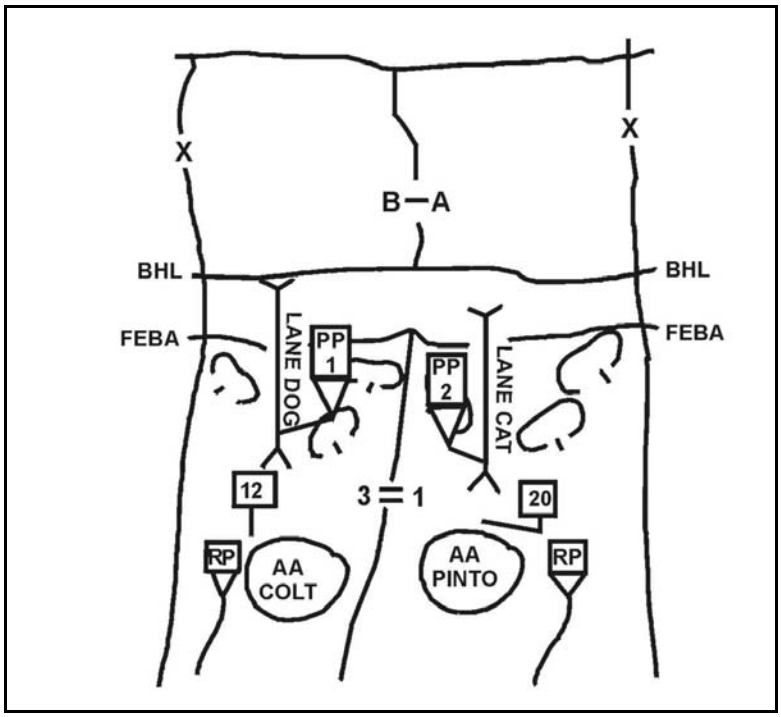


Figure 5-14. Forward Passage of Lines

PLANNING CONSIDERATIONS

5-126. The passage of lines involves the stationary unit, the passing unit, and the commander exercising command authority over both these units (common commander). The common higher headquarters coordinates and provides control measures and passage criteria. Critical tasks of the common commander are as follows:

- Establish the location and criteria for reconnaissance handover.

NOTE: The troop's higher headquarters may also be conducting a battle handover with the other force's higher headquarters. The common commander may establish a battle handover line (BHL), designating a phase line forward of the FEBA. The stationary unit commander controls the ground forward of the FEBA up to the BHL. He can place security forces, obstacles, and direct and indirect fires into this area to support his scheme of maneuver within the constraints and intent of the higher commander.

- Designate contact points just forward of the reconnaissance or battle handover lines at which stationary and passing units are required to conduct physical coordination (only in defensive operations).
- Ensure the passing unit is provided indirect fire support while its artillery is displacing during battle handover and passage of lines.

5-127. The commanders of the passing and stationary units coordinate to confirm and/or exchange information to support the passage, reporting any discrepancies from the coordination to their respective higher headquarters. Exchanged information should include the following:

- Updated friendly situation, to include stationary force dispositions.
- Updated threat situation, to include recent threat activities and trends.
- Updated civilian situation, to include impact on the passage and future missions.
- Impact of terrain on the passage and future missions.
- Obstacle locations, to include friendly lanes and, if necessary, lane closure criteria.
- Unit designations.
- Reconnaissance handover location and criteria.
- Locations of passage points, passage lanes, SPs, routes, RPs, rally points, attack positions, and AAs as necessary.
- Overwatch and direct fire support provided by the stationary unit to the passing unit.
- Fire support information, to include—
  - Assets available.
  - Critical friendly zones.
  - Preplanned targets.
  - Final protective fires.

  - Smoke targets.
- Locations or employment and purpose of ISR assets/elements working within the stationary unit's AO.
- Vehicle recognition markings and far and near range recognition signals.
- Locations and responsibilities of guides from the relieved unit.
- Estimated time of arrival of first element at the passage point and the number and type of vehicles expected at each point and lane.
- Actions on contact during the passage.
- CSS responsibilities and requirements, to include:
  - Locations of supporting CSS elements.
  - Emergency Class III and V resupply.
  - Medical evacuation.
  - Maintenance procedures, to include vehicle recovery.
  - EPW safeguard and evacuation.
- Collocation of command groups and/or posts.
- Communications information, to include:
  - FM and EPLRS frequencies.
  - IP addresses.
  - COMSEC, COMSEC key, SOI.
  - Procedures for integrating analog units into the digital network, providing information, and tracking on FBCB2 displays.

SECTION VIII - BREACH OPERATIONS

5-128. The troop may conduct limited breaching operations when a bypass is not possible and overwhelming combat power is not required. The troop relies on stealth, lane reduction techniques, and dismounted maneuver to achieve surprise and to minimize casualties. Due to limited dismounted capability of the troop, it must be augmented with engineers or infantry to ensure success. The breach should be conducted under limited visibility with terrain favoring a stealth approach to and reduction of the obstacle.

BREACHING FUNDAMENTALS

5-129. Normally the troop breaches to support its infiltration through the threat's defenses or to support the maneuver or assault of a follow-on combat element. The troop plans for and/or applies the breaching fundamentals of suppress, obscure, secure, reduce, and assault (SOSRA) to successfully breach the obstacle.

SUPPRESS

5-130. Suppression is the focus of available fires on the threat to prevent effective fires against the troop; however, suppressive fires must not betray the stealth nature of the troop's breach. The troop should plan for on-call fires on threat forces if the breach is detected. The commander may also request fires against threat forces away from the breach site as a deceptive measure.

OBSCURE

5-131. The troop should maximize the use of limited visibility and natural cover and concealment during the breach. The commander may employ HC smoke grenades or pots to reduce signature. As with indirect fires, the troop should plan for on-call smoke missions if the breach is detected. The commander may also request smoke missions away from the breach site as a deceptive measure.

SECURE

5-132. The commander should plan for a support-by-fire position that could use dismounted crew-served weapons. The security force establishes ambushes to the flanks of the breach site to guard against threat patrols. If necessary, the force silently eliminates outposts protecting the breach site. The security force provides early warning of threat patrols to the breach force, avoiding direct fire and employing indirect fires against patrols when at all possible.

REDUCE

5-133. After the security force is set, the breach force uses silent techniques to reduce the obstacle. These techniques include probing a path through minefield, marking mines, cutting wire, cutting down the sides of ditches with shovels, and setting demolition charges for later detonation at a predetermined signal. The troop should employ expedient far and near marking symbols in accordance with its SOP.

NOTE: The troop should clear one lane for infiltrating reconnaissance or assault platoon or company and a minimum of two lanes for each mounted battalion.

ASSAULT

5-134. Normally, the troop assault is limited to establishing OPs on the threat side of the lanes. Under some METT-TC conditions, the troop may silently eliminate threat OPs on the far side of the obstacle.

PLANNING CONSIDERATIONS

5-135. The commander must obtain all pertinent information on the location, disposition, composition, and orientation of the obstacle and overwatching threat forces. The commander studies the terrain to identify potential approaches and breach site(s) that make the maximum use of perceived cover, concealment, and dead space. The commander may coordinate aerial reconnaissance of potential approaches and sites to confirm his estimate, ensuring that the reconnaissance does not draw undo attention to the reconnoitered areas.

5-136. The commander identifies the lane requirements, and task organizes assigned and attached elements to best accomplish the breach. He designates reconnaissance and security, support, and breach forces.

The commander may use decentralized engineer support for breaching in support of an infiltration, or centralized support in breaching for a follow-on assault force. He determines the focus, tempo, and engagement criteria for the reconnaissance and security force, and determines the method to best silently reduce the obstacle based on his engineer's recommendations.

5-137. The commander integrates indirect fires to support the breach. He plans on-call fires to support actions such as—

- Threat detects breach before reduction or passage is complete.
- Suppressive fires on threat forces away from the actual breach site.
- Assault by follow-on forces after reduction is complete.
- Breach force detonates charges to clear mines or complete reduction of the obstacle.

5-138. The commander plans for smoke to enhance limited visibility conditions without arousing suspicion or upon detection of the breach. He develops actions on contact and/or contingency plans if the breach is detected. Actions on contact may include—

- Defeat or destroy threat security patrols with indirect and/or direct fires.
- Suppress threat forces to enable the breach force to withdraw, aborting the breach.
- Transition to an assault breach within capabilities for follow-on combat force.

Chapter 6

Combat Support

The troop can expect to receive various combat support elements, such as an engineer squad or an ADA Stinger team, from higher headquarters. The troop will also employ indirect fires and other effects during operations. Effective use of these assets requires that the troop commander have an understanding of their capabilities and limitations. Although these assets may be with the troop on a temporary basis, troop planning must address such issues as their position during movement, security responsibilities, and resupply requirements. Use of CS and fire support must be practiced during troop rehearsals.

CONTENTS

Intelligence 6-1
HUMINT Mission and Organization (Recce Troop Only) 6-2
Assessment of AO 6-7
Special Considerations 6-7
Fire Support/Target Acquisition 6-8
Roles and Responsibilities 6-8
COLT Platoon and BRT 6-12
Fire Support Assets and Capabilities 6-13
Army Aviation 6-25
Air Cavalry 6-25
Attack Helicopter Support 6-33
Assault and Cargo Helicopter Support 6-42
UAV Platoon 6-45
Platoon Headquarters 6-46
Ground Planning and Control Section 6-46
Launch and Recovery Section 6-48
Maintenance Team 6-48
Ground Sensor Platoon 6-48
Platoon Leadership 6-49
IREMBASS/GSR Section 6-49
Multisensor Ground Platoon 6-51
Headquarters Element 6-51
Control Team 6-52
PROPHET (SIGINT) Section 6-52
NBC Operations 6-54
Troop NBC Defensive Operations 6-54
NBC Reconnaissance 6-55
BCT Engineer Operations 6-56
Capabilities 6-56
Concept of Operations 6-56
Organization and Functions 6-58
Air Defense 6-60
Passive Air Defense 6-60
Active Air Defense 6-61

The troop commander must also consider unique communications requirements when employing supporting elements. Some CS and fire support organizations will have ABCS such as FBCB2 and AFATDS. Communications for other supporting units may be limited to FM radios.

SECTION I - INTELLIGENCE

6-1. While only the recce troop has 97Bs (HUMINT collectors) assigned, the mounted BRT uses HUMINT as well. Reconnaissance organizations have used information gained from locals and prisoners from the beginning of organized warfare. HUMINT operations are an integral part of the troop's reconnaissance effort. The operational environment of the troop offers a wide array of human intelligence

sources, to include EPWs, detained persons, refugees, local inhabitants, and friendly forces. Troop, squadron, and brigade operations and the emphasis on HUMINT have required changes in the employment and reporting procedures of the HUMINT collectors to ensure that their contribution to the common operating picture is timely and relevant. During entry and combat operations, the HUMINT collection assets provide combat information obtained from human sources and documents. During stability or support operations, HUMINT collection is the primary contributor to intelligence support for force protection. HUMINT contributes to the development of a situational understanding through the interrogation and debriefing of HUMINT sources and the exploitation of documents in response of higher's ISR plan.

6-2. As illustrated from our experience in the former Yugoslavia, reconnaissance squads with assigned HUMINT collectors can enhance the effectiveness of traditional operations. This is because of the large amount of incidental contact between an R&S patrol and the civilian population in the course of routine missions. The immediate employment of an intelligence specialist who is trained in soliciting combat information via interrogations/interviews greatly expands the value of the R&S patrol. HUMINT collectors can assist the troop commander in assessing his operating environment by their knowledge of the following:

- Attitude of local populace.
- Ability of local populace to take care of itself.
- Capability of local government to function.
- Civilian chain of command.
- Populations of major towns and villages in the AO.
- Number and demographics of displaced civilians.
- Origin and flow of displaced civilians.
- Location of collection points, assembly areas, and displaced civilian camps.
- Expected increase or decrease in number of displaced civilians in the next 24 hours and their direction and means of travel.
- Terrorist or guerrilla activity in the same AO.
- Status of planned/on-going civil-military operations.

6-3. With the new appreciation of HUMINT collection, the troop has a robust organic HUMINT collection capability. The recce troop contains 13 HUMINT collection specialists—one at the troop headquarters and four pushed down to each platoon. Placing a HUMINT specialist organic to each squad will institutionalize the capability and place a trained HUMINT collector where he can best interface with the local populace on a day-to-day basis. This additional asset will elevate the traditional R&S mission to a new dimension of gathering combat information. If the imbedded language capability within the troop does not match the contingency language, linguists will be attached to the unit during deployment. The troop leadership must make provisions to integrate these linguists into their concept of operation.

HUMINT MISSION AND ORGANIZATION (RECCE TROOP ONLY)

6-4. The four HUMINT collectors in each recce platoon provide the recce troop an organic trained HUMINT collection capability. The HUMINT collector will normally be distributed as one per reconnaissance

squad, but can be task organized based on METT-TC to concentrate HUMINT collection capability as needed to meet specific mission parameters. The HUMINT collectors could be task organized as a team within the platoon to focus efforts on a specific checkpoint, or task organized as a twelve-man team to focus on an urban area. The HUMINT collector's mission is to—

- Collect information of immediate tactical value from EPWs, civilian detainees, refugees, and civilians on the battlefield.
- Collect information of immediate tactical value from foreign documents.
- Assist in the debriefing of friendly forces, such as patrols.
- Identify individuals for potential detailed exploitation by the HUMINT collectors in the brigade's MI Company.

6-5. The senior HUMINT collection NCO at the platoon level will advise the platoon leader on HUMINT collection operations, provide initial assessment and quality control of HUMINT collection and source spotting, and act as the platoon HUMINT trainer. The HUMINT collections NCO at troop level will advise the troop commander on HUMINT collection operations, provide assessment and quality control of HUMINT collection and source spotting, and ensure the training is conducted to standard.

HUMINT COLLECTION OPERATIONS

6-6. HUMINT collection is an integral part of all recce troop operations. The synchronization of the information collected from human sources is vital to troop mission success.

HUMINT Collection in Support of Offensive Operations

6-7. During offensive operations, the HUMINT collectors are focused on the integration of EPWs and civilians on the battlefield. The commander will determine, based on METT-TC, when and if the scouts should attempt to make contact with civilians or to capture prisoners. The commander must weigh the benefits of information gained against exposing the HUMINT collector and scouts to threat forces.

HUMINT Collection in Support of Defensive Operations

6-8. HUMINT missions in defensive operations include interrogation of EPWs, to specifically include EPWs captured and brought back by patrols; refugee debriefing; assisting in friendly force patrol debriefing; and limited force protection source operations.

HUMINT Collection in Support of Urban Operations

6-9. During military operations in urban terrain, people (EPWs and civilians) are the preeminent source of information. HUMINT collection provides information, such as descriptions of building interiors, not otherwise available through signal or imagery intelligence. In urban operations, the HUMINT collectors can be deployed at the squad level, or consolidated for focused mass HUMINT collection. Maintaining the HUMINT collectors at the squad level achieves dispersed collection operations and increases the opportunities for chance contact with either an EPW or displaced civilian. Massing the HUMINT collectors at the troop may be applicable during a stability operation or a support operation where there is a diminished need for the recce platoons to

provide security. During SSC operations, the HUMINT collectors are able to interrogate EPWs, to persuade holdouts to surrender, and to help with the questioning and evacuation of noncombatants that are encountered in buildings. They also collect information concerning floor plans, defensive plans, locations of combatants and noncombatants in buildings and the surrounding neighborhood, and other pertinent information. The collected information is passed both vertically and horizontally, based on unit SOP.

HUMINT Collection in Support of Stability Operations or Support Operations

6-10. The primary focus of the HUMINT collectors during stability operations or support operations is intelligence support for force protection. Centralized management and databases are key to successful HUMINT operations in support of force protection. The HUMINT collectors organic to the recce troop will normally be allocated to individual reconnaissance squads, as necessary, to provide a language and tactical questioning ability, to translate and exploit foreign documents, and to identify individuals as potential counterintelligence (CI) sources to be more fully exploited by the HUMINT platoon in the MI Company. The HUMINT teams establish a network of force protection sources, debrief casual sources, and interview/debrief local national employees to increase the security posture of US forces, to provide information in response to command collection requirements, and to provide early warning of threats to US forces. The HUMINT collectors develop both the overall HUMINT picture and the more specific threat intelligence collection (CI) picture. Additionally, the HUMINT collector is in the position to articulate the friendly force's position and draw commonality with the local populace while dispelling antifriendly propaganda.

DOCUMENT EXPLOITATION OPERATIONS

6-11. Document exploitation (DOCEX) is the extraction and exploitation of information with intelligence value from documents, to include all types of written or recorded media. The HUMINT teams perform limited exploitation of documents for information of immediate tactical interest dealing primarily with documents found on or in immediate association with EPWs, civilian detainees, refugees, and other HUMINT sources. In their traditional role, HUMINT collectors review captured orders and maps. In stability operations, as an example, they monitor election posters in different ethnic areas.

6-12. The exploitation of documents captured on or in association with HUMINT sources is performed in conjunction with the initial tactical questioning of these individuals. Documents that cannot be exploited by the HUMINT teams in a timely fashion (due to their size or technical nature) are scanned and transmitted to higher for translation and exploitation.

6-13. See FM 2-22.3 [FM 34-52] and FM 2-22.2 [FM 34-5] for more detailed information on HUMINT operations.

TACTICAL QUESTIONING

6-14. When conducted properly, tactical questioning elicits valuable, timely, and accurate information from the local populace. When conducted improperly, the questioner confuses the subject, waste time,

and receive inaccurate information. Tactical questioning must answer *who, what, where, when, how,* and *why*.

Effective Questioning

6-15. Questioning is more than just asking questions. Reconnaissance soldiers, acting as questioners, must maintain control and not lose the initiative. Since the questioner is conducting a hasty/unconventional interrogation, he should tailor his questions to fit the source. A civilian may not understand if he uses jargon or speak too quickly. Below are four types of effective questioning:

- **Direct.** What is your name? Who is your organization's leader?
- **Follow-up.** These are used to exploit a topic of interest. Questions usually flow from one to another based on the answer to the previous question.
- **Control.** Used to maintain control and to check the accuracy and truthfulness of the source's statements. Control questions should be mixed with normal questions throughout the interview/interrogation.
- **Repeat.** A technique to ensure accuracy, particularly when you suspect the source is lying. Since a lie is more difficult to remember than the truth, you can discover errors by rephrasing or disguising the same questions that the source has already answered.

6-16. Principles of good questioning include the following:

- Ask questions that are simple, brief, and to the point.
- Ask for narrative responses.
- Use follow-up questions.

6-17. The following are types of questions to avoid:

- **Negative.** Questions that contain not, no, or none.
- **Leading.** These tend to prompt the source to give the reply he believes the questioner wants to hear, or they may simply answer yes or no, which requires the questioner to ask more leading questions to complete the facts.
- **Compound.** A compound really asks two or more questions. The source may either become confused or intentionally provide incomplete responses.
- **Vague.** Vague questions elicit very broad and general answers. The source may answer a question totally unrelated to the topic. This may lead to tangents or false and misleading information.

6-18. Additional guidelines to effective questioning include:

- Clarify vague statements sources make.
- Never take anything for granted; always ask the obvious.
- Clarify ambiguous statements. Ambiguity is something that can be interpreted more than one way; therefore, statements that include words like *possible, always, everywhere, everything, a few, far,* and *near* should be clarified.

- If a point is still unclear, have the source make a drawing. Annotate the drawing with the source, i.e., what the drawing represents, where the drawing was made (such as hilltop looking south), north directional arrow, and date-time group.

Effective Listening

6-19. Along with effective questioning, questioners must learn the skill of effective listening. They need to remain calm, gather the facts, and exploit all leads completely. Questioners should not let the excitement of the source divulging information fog their judgment. Showing excitement may indicate to the source what the questioner is attempting to exploit. Secondly, don't jump the gun. Cutting off the source before he finishes answering may cost the questioner a valuable lead. Ask the question and observe the source. If the source answers and then pauses, wait him out; he or she may have more to say. Silence can also be a strong weapon. Do not put words in the source's mouth; let him finish his thoughts.

Understanding Human Reactions

6-20. Along with effective questioning and listening, understanding human reactions provides valuable information about the source's responses. During an interaction, people will often break eye contact and avert their eyes momentarily as they access information to answer a question or to think about what they are going to say. We all have a unique pattern of accessing internal information. Generally, individuals will shift their eyes according to the internal system they are accessing. The model below is a generalization and unreliable in some cases.

NOTE: This model is for a right-handed person. The cues are reversed for a left-handed person.

- Subject looks up and to the right, indicating he is visualizing something that has not been seen before, i.e., creating images.
- Subject looks up and to the left, indicating he is recalling something seen before, i.e., a visual memory.
- Eyes staring into space. Not focused with some pupil dilation; either visual recall or visualizing something that has not been seen before.
- Subject looks directly right, indicating he is imagining sounds and creating spoken language.
- Subject looks directly left, indicating he is recalling sounds from memory.

6-21. In addition to watching eye movements, the following behavior should be observed:

- Gestures.
- Posture.
- Muscle tension.
- Skin color.
- Breathing.
- Voice tone/tempo/volume.

Debriefing

6-22. As soon as a team returns to the assembly area, it goes to a secure area for debriefing. In preparing for the debriefing, the team—

- Accounts for all team and individual equipment.
- Prepares overlays of the team's route, AO, infiltration point, exfiltration point, and sighting locations.
- Reviews and discusses the events listed in the team notebook, from infiltration to return to the assembly area, including the details of each threat sighting.

6-23. IO personnel or the troop commander normally conducts the debriefing. A communication representative debriefs the team members separately after the team debriefing to develop the communications architecture within the urban area. The team leader gives a step-by-step discussion of every event listed in the team notebook, from the infiltration until the return to the assembly area. When the debriefing is over, the team is released for equipment maintenance and recovery.

ASSESSMENT OF AREA OF OPERATIONS

6-24. The troop commander receives and analyzes the information gathered by the R&S teams. The commander then assesses the AO according to the mission and intent of higher. The assessment will include, but is not limited to—

- Threat composition and activity.
- Areas of vulnerability to friendly forces.
- Key terrain.
- Approach routes for mounted and dismounted forces.
- Entry points or points of penetration.
- Support positions for direct and indirect systems.
- Civilian disposition.
- Density and composition of urban area.
- Hazard areas (fuel storage, natural gas lines, chemical production sites).
- Communication facilities.
- Retransmission sites.
- Intent of civilian populace (stay or flee).

SPECIAL CONSIDERATIONS

6-25. The SSC environment is the most difficult, complex, and challenging environment for ISR integration/operations. Ambiguous and difficult-to-identify threats characterize this environment. SSC operations require detailed intelligence on equipment and facilities not normally considered military targets, diverse augmentation requirements, and intense political pressures, to include demands to minimize friendly and threat casualties. Such operations might often be in urban areas where it is extremely difficult to predict terrain, health, and criminal factors that affect the employment of soldiers and weapons. The heavy reliance on HUMINT sources, coupled with the continuing demand for traditional technical collection means used in the MTW environment, demand a more robust analytic and collection effort than in the traditional intelligence organizations. The ISR capabilities resident in the brigade are capable of meeting the challenge of ISR operations across the spectrum of conflict.

SECTION II - FIRE SUPPORT/TARGET ACQUISITION

6-26. Digital systems greatly enhance the commander's ability to focus both direct and indirect fires. However, their lethality is a by-product of effective planning, integration, and synchronization. These systems provide the commander improved situational awareness that enhances his ability to visualize his battlespace and subsequently tailor fire missions and essential fire support tasks to meet a variety of needs. In the case of indirect fires, FBCB2 provides a basic call-for-fire capability, linking an FBCB2-equipped observer to a supporting FIST who further transmits the call-for-fire via an AFATDS handheld terminal unit to the supporting fire direction center. As an alternative, a scout may send a call for fire via FM voice to the FIST, a platoon leader, or to the troop CP.

6-27. While the advent of digitization enhances the focusing of fires, it does not increase the lethality of munitions or ammunition allocations. Digitization allows the commander to rapidly exploit his battlespace by both lethal and nonlethal fires. It also improves his ability to tailor fire missions to meet a variety of critical fire support tasks.

ROLES AND RESPONSIBILITIES

6-28. The fire support system is the collective body of target acquisition; weapons/ammunition; and digitized C4ISR systems, facilities, and personnel required to manage, integrate, and synchronize fire support. Scouts, FISTs, and unit leaders are the primary acquisition element of the fire support system. The troop commander and his fire support officer must know the capabilities and limitations of the systems available.

FIRE SUPPORT COORDINATOR

6-29. At troop level, the fire support coordinator (FSCOORD) is the FSO. As such, he advises and assists the troop commander in all aspects of fire support planning and coordination, to include fires planned in support of troop missions. He coordinates indirect fires based on the troop commander's focus and intent and the directives from higher. The troop commander must ensure the FSO/FIST understands the fire support plan and his responsibilities as specified in the brigade/squadron OPORD and ensure they are briefed on the following:

- Target responsibilities.
- Reconnaissance responsibilities (if applicable).
- Location of proposed OPs.
- Routes.
- Concept of fires, including fires to support troop operations.
- Current threat dispositions.
- Logistical and administrative requirements.
- Operational frequencies and nets.
- FBCB2 IP addresses.
- Attack criteria.
- When/where the commander wants to mass indirect fires.

FIRE SUPPORT TEAM (RECCE TROOP ONLY)

6-30. The troop commander has overall responsibility for the integration of fires and maneuver for his unit. However, he has an element within his headquarters to assist with the planning, coordination, and integration of all the fire support assets that may support the troop. This fire support organization is called the FIST and is supervised by the troop FSO (see Figure 6-1). On the basis of the commander's guidance, the FSO develops a fire support plan and presents it to the commander for approval. Some of the responsibilities of the FSO/FIST include—

- Plan, coordinate, and execute fire support.
- Advise the commander on all aspects of fire support.
- Request, adjust, and direct all types of fire support assets.
- Advise the commander on the positioning and employment of the troop mortars.
- Provide emergency control of CAS missions in the absence of qualified Air Force personnel.
- Provide emergency control of naval gunfire (NGF) missions in the absence of qualified USMC personnel.

6-31. The FIST element also assists in target acquisition, calls for fire, and fire control through digital links established with the FSE. The squadron FSO, S2, and S3 coordinate closely to focus and synchronize fires that will support the scheme of maneuver by taking advantage of near-real time targeting information provided by intelligence, acquisition, and targeting systems. Information provided by AFATDS is often useful to the S2 in preparing and analyzing situational templates. Additionally, FA target acquisition systems and the all source analysis system–workstation (ASAS-RWS) provide targeting information that the scout and FIST elements use during R&S missions.

6-32. The squadron FSO develops the squadron fire support plan. Once developed, the squadron FSO assigns responsibility for each of the targets to a FIST team, troop scouts, or a subordinate unit. In doing so, he will specifically task the troop, through the S3, for positioning of FIST teams and execution of fire support tasks.

6-33. The FIST element operates on two radio nets:

- Troop net.
- Supporting artillery call for fire net 1 (CFN-1).

Figure 6-1. Fire Support Team Organization

PLANNING AND COORDINATION

6-34. To provide the troop commander with the necessary support, the FIST must conduct planning specific to the type of operation that the troop is conducting. Fire support planning and coordination begins on receipt of a mission and continues throughout planning and execution. The troop FSO should be positioned with the troop commander, at the troop CP, or where he can best maintain situational awareness and provide support in executing the squadron and troop fire support plan as well as control the positioning of the FIST.

NOTE: Planning and coordination aspects apply to both troops except where indicated.

Offensive Operations

6-35. The following actions and considerations apply for fire support planning, coordination, and execution when the troop conducts offensive operations:

- Determine when and how to shift priorities of fires.
- Specify the trigger for shifting priorities of fire.
- Plan fires en route to the line of departure/line of contact.
  - Plan fires to support hasty defense if attack stalls.
  - Plan fires in support of the unit assembly area.
- Plan fires from the line of departure/line of contact to the objective.
  - Provide priority of fires to lead elements.
  - Consider smoke to limit threat observation of friendly elements.
  - Consider smoke in support of breach sites, screening movements, and deception operations.
  - Plan fires on exposed flanks to disrupt counterattacks.
  - Consider task organization of observers to ensure all critical targets are observed.
  - Consider preparatory fires.
- Plan fires on the objective.
  - Plan fires that isolate the objective.
  - Consider fires to delay threat reinforcements and resupply.
  - Plan fires to suppress threat direct fire weapons.
  - Consider the use of smoke to screen or obscure.
  - Plan signals for shifting fires.
  - Plan fires in support of a hasty defense upon successful attack of the objective.
- Plan fires beyond the objective.
  - Plan fires to divert, delay, or limit threat reinforcements.
  - Plan fires on likely counterattack avenues of approach.
  - Plan fires to disrupt or delay threat retreat.

Defensive Operations

6-36. The following actions and considerations apply for fire support planning, coordination, and execution when the troop conducts defensive operations:

- Plan alternate positions for mortars.
- Plan suppression of enemy air defense (SEAD) in support of CAS missions.
- Plan for priority of fires.
- Plan fire support early and throughout the entire defensive sector.
- Plan final protective fires (FPF).
- Plan fires forward of the main battle area (MBA).
  - Plan counterreconnaissance fires.
  - Plan fires to force the threat commander to deploy his forces early.
  - Position observers on templated avenues of approach.
  - Plan fires on key choke points.
  - Plan FASCAM and smoke to separate lead elements from follow-on forces.
- Plan fires in the MBA.
  - Mass to disrupt, delay, and destroy the threat.
  - Plan fires on key obstacles and assign redundant observers to execute fire plan.
  - Know the engineer obstacle plan and types of obstacles.
  - Consider the terrain when targeting obstacles.
  - Consider the use of smoke to support the obstacle plan.
- Plan fires in support of engagement areas.
  - Use fires to canalize the threat.
  - Plan groups and series for simultaneous engagements.
  - Mass fires in engagement areas.
  - Plan coordinated attacks with close air support.
  - Consider use of special munitions (illumination, smoke, Copperhead).
- Ensure fires are in strict accordance with the rules of engagement. Nonlethal fires may be the primary means in these types of operations.
- Plan and rehearse clearance of fires drill.
- Plan for employment of radars, e.g., critical friendly zones.
- Plan for employment of precision munitions to limit collateral damage.

COLT PLATOON AND BRT

6-37. The COLT platoon is organic to the direct support artillery battalion, but will normally operate attached to the BRT. It is capable of mounted and dismounted operations, to include dismounted airmobile operations. The focus of effort for the platoon is essential fire support tasks established by the brigade commander and his staff. The purpose of the fire support effort must be clearly stated to prevent the COLT platoon from wasting time. The platoon leader acts as the BRT fire support officer (FSO). Fire support and reconnaissance missions require the platoon to be more tactically mobile than the parent brigade. The same or similar HMMWV platforms as the BRT scouts provide this mobility.

6-38. The distance that the COLT platoon operates from the main body is restricted by the capability of its communications equipment. With its organic equipment, the platoon operates three nets—brigade OI net, brigade fire support net, and the platoon net.

6-39. The training of COLTs should parallel that received by scouts, as their roles are similar and overlap. Scouts exist to conduct R&S and small-scale tactical operations in support of the higher headquarters plan. COLTs can be tasked to support the ISR plan, but this is not their primary mission. Their primary mission is the execution of fires in support of the brigade battle plan, but in doing so, will usually be positioned to provide surveillance and intelligence. (The platoon's ability to conduct continuous surveillance is limited due to operational requirements and personnel constraints. METT-TC dictates the extent of operations the platoon can conduct.) Like scouts, the COLTs rely on stealth and communications to be successful and survive.

6-40. The COLT platoon can operate as squads, as separate teams under platoon control, or be tasked organized with the scouts. The decision to work as squad or team is based on METT-TC factors. The COLT platoon leader considers those factors while making his estimate of the situation. Squads perform fire support and reconnaissance missions as directed by the platoon headquarters. Squads also assist in tactical control and coordination.

SQUADS

6-41. A squad is composed of two teams; each team consists of a team leader (who may also be a squad leader) and two soldiers. Each team is equipped with the lightweight laser designator/rangefinder (LLDR) that will designate targets for those munitions requiring reflected laser energy for final ballistics guidance. They are also equipped with the AFATDS lightweight computer unit loaded with the forward observer software (FOS-LCU). The target designator set also has a thermal sight.

TASK ORGANIZATION

6-42. The structure of the BRT as described above provides some unique capabilities and some challenges in task organization. There are essentially three task organization options the troop commander should consider for tactical employment: pure platoons, integrated platoons, and attached COLT teams. Which option to use is primarily dependent on—

- Brigade commander's reconnaissance guidance.
- The width of the sector the troop is operating in.

- Threat situation.
- Whether the mission is weighted more toward reconnaissance or executing the brigade fire support plan.
- Distances for communications and impact on command and control.
- Security requirements for the BRT and attachments.

Pure Platoons

6-43. Although employing pure platoons will probably not be the normal method of operation, some conditions or missions require pure platoon employment. Some conditions that might require this are—

- A large portion of the troop conduct reconnaissance or surveillance operations to the flanks and/or rear of the brigade while the COLTs are required forward of the BCT.
- The COLT platoon is required to operate under the direct control of the BCT FSCOORD.
- There are no additional assets to task organize with the scout platoons, and the COLT platoon is operating under artillery control.

Integrated Platoons

6-44. Probably the most common way to employ the platoons is to integrate the scouts and COLT platoons together, creating two platoons, each with a platoon headquarters, two scout sections, and two to four COLT teams. This method of employment is best utilized when the troop must cover an extended sector, requiring both reconnaissance and fire support observation capabilities throughout the area.

Attached COLT Teams

6-45. The situation may dictate that the best task organization is to attach two or three COLT teams to the scout platoons. The remainder of the COLTs is left under the control of the COLT platoon leader to focus on execution of the brigade fire support plan. This might be used when one or both of the scout platoons require some fire support augmentation, and when execution of the fire support plan requires some COLT assets to remain under artillery control focused on artillery observation missions.

6-46. No matter what task organization is employed, success will be achieved only if the scouts and COLTs have habitually trained together on the same critical reconnaissance, surveillance, and artillery observer tasks. The unit cannot achieve full potential and the ability to be flexibly employed if they focus only on their individual artillery or scout MOS tasks. They must constantly work and train with the mindset that they are both scouts and artillery observers, equally versed in both missions.

FIRE SUPPORT ASSETS AND CAPABILITIES

6-47. Fire support assets include field artillery, mortars, close air support, and naval surface fire support (NSFS). These assets support operations by disrupting, delaying, diverting, limiting, and destroying threat forces. Lethal fires, nonlethal fires (currently smoke and illumination), or combinations of both are employed to accomplish this support.

6-48. Effects are the result of an application of lethal fires (excluding ground-based direct fires) and nonlethal effects directed against a target within the battlespace to achieve a desired purpose (decisive, shaping, or protective), supporting the commander's intent. Effects provided by organic, OPCON, and joint, multinational, and national lethal and nonlethal systems are integrated and synchronized by the SBCT. The application of these capabilities achieves full spectrum effects.

6-49. The troop leadership must be aware of the capabilities of the available radar systems (see Table 6-1). Radars will play a significant role in the detection of threat artillery/mortar systems and provide valuable location information to the troop.

Table 6-1. Radars

	Range-Meters		Scan Sector[1]		Emplacement Time[2]	Displacement Time*[2]	General Location
	MIN	MAX	MIN	MAX			
AN/TPQ 36	750 m	12K-Arty and Mort 24K-Rockets	230 mils	1,600 mils	20 minutes	10 minutes	3-6 km behind the FLOT
AN/TPQ 37	3,000 m	30K-Arty 50K-Rockets	300 mils	1,600 mils	30 minutes	15 minutes	8-12 km behind the FLOT

[1] Can scan 6,400 mils by using extended azimuth search function; however, this is not common practice.
[2] Time does not include set-up or take down of camouflage systems.

FIELD ARTILLERY

6-50. The brigade, cavalry squadron (RSTA), and hence the troop, is supported by a field artillery battalion. As part of its unit basic load, this battalion has several different munitions available to support the troop. It has lethal munitions such as HE, DPICM, Copperhead, white phosphorous (WP), and scatterable mines (ADAM/RAAMS). It also has nonlethal munitions that include smoke and illumination. Table 6-2 lists some capabilities of the various munitions.

Table 6-2. Munitions Capabilities

CONVENTIONAL MUNITIONS					
MAX RANGES (M198)			FPF WIDTH	RATES OF FIRE	
HE/DPICM	ERDPICM	RAP	400m	SUSTAINED	MAX
18,100	28,400	30,000		varies	4 rounds/min
ILLUMINATION					
MAX RANGE	BURN TIME	RATE OF FIRE CONTINUOUS ILLUM			ILLUM DIAMETER
17,500	2 minutes	1 round/min			1,000m
SMOKE					
TYPE	TIME TO BUILD EFFECTIVE SMOKE			AVG BURN TIME (MINUTES)	
WP	30 SECS			1 to 1½	
SMOKE	30 SECS			5 to 10	

6-51. In addition to the supporting cannon units, MLRS elements may also provide either rocket or missile fires. Unlike cannon artillery, MLRS units do not fire a variety of munitions. The maximum range of MLRS rockets is 32,000 meters.

NAVAL SURFACE FIRE SUPPORT

6-52. Destroyers and cruisers are the predominant ships used in NGF roles. Both ships use five-inch guns to provide fires. In the event augmentation to conduct NGF missions does not occur, the NGF call-for-fire procedures are listed step by step in Figure 6-2. Table 6-3 provides naval gunfire data for the available types of munitions.

NAVAL GUNFIRE CALL FOR FIRE

1. FIRST TRANSMISSION:
   - A. SPOTTER ID: _____ DE _____
   - B. WARNING ORDER: "FIRE MISSION"
   - C. TARGET NUMBER _____ (SPOTTER ASSIGNS)

----------OVER----------

2. SECOND TRANSMISSION
   - A. TARGET LOCATION
     - (1) GRID _____
       ALTITUDE _____
       DIRECTION _____
     - (2) POLAR: DIRECTION _____
       DISTANCE _____
       U/D (IF ≥ 5M) _____
     - (3) SHIFT: FROM TGT # _____
       DIRECTION _____
       L/R _____
       U/D (IF ≥ 5M) _____
   - B. TARGET DESCRIPTION: _____
     (TYPE, SIZE, DEGREE OF PROTECTION)
   - C. METHOD OF ENGAGEMENT
     - (1) DANGER CLOSE, CARDINAL DIR & DIST TO FRIENDLY UNIT
     - (2) TRAJECTORY: - FULL CHARGE *
       - REDUCED CHARGE
       - HIGH ANGLE
     - (3) AMMUNITION: _____ - (HE/Q)*
     - (4) NUMBER OF GUNS: - ONE GUN *
       - TWO GUNS
     - (5) NUMBER OF SALVOS _____
       -SENT IF ADJUSTING WITH MORE THAN 1 RD OR A FFE MISSION
     - (6) SPECIAL INSTRUCTIONS: - INTERVAL
       - SUSTAINED
       - TIME ON TARGET
       - COORDINATED ILLUM
       - CONTINUOUS ILLUM
   - D. METHOD OF CONTROL:
     - (1) SPOTTER ADJUST
     - (2) SHIP ADJUST
     - (3) FIRE FOR EFFECT
     - (4) CANNON OBSERVE
     - (5) AT MY COMMAND

----------OVER----------

Figure 6-2. Naval Gunfire Call-for-Fire Form

3. PREPARING REPORT (SPOTTER READS BACK)
GTL _____, LINE OF FIRE _____, SUMMIT (MAX ORD) _____,
FIRST SALVO AT _____, ANY CHANGES _____.
READY, TOF _____. BREAK; *FIRE*
----------*OVER*----------

4. SHOT / SPLASH – every volley in adj and 1st FFE volley

5. CORRECTION, _____VOLLEYS (if different than adjustment), FFE,
----------*OVER*----------

6. RREMS
R/L
+/-
U/D
EOM
BDA (EST _____ CASUALITIES)
----------*OVER*----------

NOTES:

ENTER FFE WHEN:
1. ADJUSTING ROUND HAS EFFECTS ON TARGET
2. SPLITTING 100M BRACKET FOR POINT TARGET
3. SPLITTING 200M BRACKET FOR AN AREA TARGET

- USE STANDARD ARTILLERY CORRECTIONS FOR Q, TI & VT FUZES

* DENOTES STANDARD IN CFF

SEQUENCE OF SUBSEQUENT CORRECTIONS:
1. DIRECTION
2. DANGER CLOSE
3. TRAJECTORY
4. SHELL
5. FUZE
6. DEVIATION
7. RANGE
8. HOB
9. NUMBER OF GUNS
10. NUMBER OF SALVOS
11. METHOD OF CONTROL

Fresh Target Shift
1. Spotter ID: omitted
2. Fresh Target, Target # _____
3. Target Location: Sent from last Salvo
4. Target Description: Always sent
5. Method of Engagement: omitted if different
6. Method of Control: omitted if different

New Target Shift
1. Spotter ID: omitted
2. New Target, Target # _____
3. Target Location: Sent from last salvo
4. Target Description: Always sent
5. Method of Engagement: omitted if different
6. Method of Control: omitted if different

Preface each correction with Target #

Figure 6-2. Naval Gunfire Call-for-Fire Form (continued)

Table 6-3. Naval Gunfire Capabilities

Ammunition	RANGE
High Explosive	Full Charge: 23,127M; Reduced Charge: 12,200M
Illumination	Full Charge: 23,127M; Reduced Charge: 12,200M
White Phosphorous	Full Charge: 23,127M; Reduced Charge: 12,200M

CLOSE AIR SUPPORT

6-53. The Air Force, Navy, and Marine Corps provide the Army with the following five types of fixed-wing air support:

- CAS.
- Combat air reconnaissance.

- Tactical airlift.
- Electronic combat.
- Air interdiction.

6-54. CAS missions are the most common type of mission flown in support of the troop. CAS is defined as air attacks on hostile surface forces that are in close proximity of friendly troops. CAS can be employed to blunt a threat attack, support the momentum of the ground attack, or provide cover for friendly movements. For best results while avoiding mutual interference or fratricide, aircraft are kept under "detailed integration" (part of the Air Force's combat air system). Until the USAF achieves air superiority, competing demands between CAS and counterair operations may limit sorties apportioned for the CAS role. Nomination of CAS targets is the responsibility of the commander, ALO, and S3 at each level.

6-55. In most cases, these CAS sorties are planned by the squadron S2, S3, and FSCOORD and requested through the squadron ALO. It is quite possible that the troop may have a tactical air control party (TACP) attached to it for security and positioning to execute planned CAS missions. FISTs attached to the troop are also trained in controlling close air support and may have control of a CAS mission as part of an essential fire support task. CAS flown specifically in support of the troop is normally an on-call mission and takes the form of an immediate CAS request that can be controlled by an FSO or TACP. In other cases, Army aviation aircraft (OH-58D and AH-64D aircraft) and USAF or USMC aircraft may perform joint air attack team (JAAT) operations.

6-56. Tables 6-4 and 6-5 depict the aviation assets most likely to be available to support the troop. USAF, USN, and USMC aircraft are listed within the same charts to save space. USAF and USMC personnel are the primary means for requesting and controlling their respective service's aircraft. However, if no personnel augmentation by the other services is available, then the organic fire support personnel are the primary means for coordinating and controlling CAS aircraft. In the event USAF or USMC personnel do not augment the troop to assist in controlling CAS, a CAS briefing form is located at Figure 6-3.

Table 6-4. Fixed-Wing Aircraft

AIRCRAFT	SERVICE	CHARACTERISTICS (Typical Munitions)
AV-8B1	USMC, USN	VSTOL CAS aircraft; subsonic; typical load 4,000 lbs. Maximum load 9,200 lbs; 25-mm Gatling gun.
A-10 or O/A-10[1]	USAF, USAF Res, USAF NG	Specialized CAS aircraft; subsonic; typical load 6,000 lbs. Maximum load 16,000 lbs; 30-mm gun.
F-15E	USAF	Multirole aircraft; priority is air-to-ground; supersonic; maximum load 24,500 lbs; 20-mm cannon w/512 rounds.
F-16[1]	USAF, USAF Res, USAF NG	Multirole aircraft; complements the F-15 in an air-to-air role; most accurate air to ground delivery system in the inventory; supersonic; typical load 6,000 lbs. Maximum load 10,500 lbs.
F/A-18[1]	USN, USMC	Multirole fighter; wide variety of air-to-surface weapons; typical load 7,000 lbs. Maximum load 17,000 lbs; 20-mm gun mounted in the nose and air-to-air missiles.
AC-130[1]	USAF, USAF Res	Specialized CAS/RACO aircraft, propeller driven, two models. The A model is equipped with two 40-mm guns, two 20-mm guns, and two 7.62-mm miniguns. The H model is similar, except it has no 7.62 miniguns and one of the 40-mm guns is replaced with a 105-mm Howitzer. Both models have advanced sensors and target acquisition system including FLIR and low-light TV. Weapons employment accuracy is outstanding. This aircraft is vulnerable to threat air defense systems and must operate in a low ADA threat environment.
[1] Aircraft with FM communications.		
NOTE: Typical load is average load for typical support mission; maximum load is the amount the aircraft can carry in an ideal situation.		

Table 6-5. Rotary-Wing Aircraft

AIRCRAFT	SERVICE	CHARACTERISTICS (Typical Munitions)
AH-1 AH-1W	US Army USMC	20-mm gun (750 rounds); 8 TOW or 8 Hellfire missiles; 76 2.75-inch FFAR; Capable of carrying limited fuel-air explosives.
OH-58D (Kiowa Warrior)	US Army	4 Hellfire missiles, 14 2.75-inch FFAR; 524 caliber .50 machine gun rounds; 4 air-to-air Stinger missiles (if only weapon system used, or 2 in combination with another weapon system).
AH-64D	US Army	30-mm gun (1200 rounds); 16 Hellfire missiles; 76 2.75-inch FFAR
NOTE: FFAR – folding fin aerial rocket.		

CAS Briefing Form (9-Line)

(Omit data not required, do not transmit line numbers. Units of measure are standard unless otherwise specified. * denotes minimum essential in limited communications environment. Bold denotes readback items when requested.)

Terminal controller: "_____, this is_____"
(aircraft call sign) (terminal controller)

***1. IP/BP: "_____"**

***2. Heading: "_____" (magnetic).**
(IP/BP to target)

Offset: "_____ (left/right)"

***3. Distance:**
"_____"
(IP-to-target in nautical miles/BP-to-target in meters)

***4. Target elevation: "_____" (in feet MSL)**

***5. Target description: "_____"**

***6. Target location: _____"**
(latitude/longitude or grid coordinates or offsets or visual)

7. Type mark: "_____ " Code: " _____"
(WP, laser, IR, beacon) (actual code)

***8. Location of friendlies: "_____"**

Position marked by: "_____"

9. Egress: "_____"

Remarks (As appropriate):" _____"
(threats, restrictions, danger close, attack clearance, SEAD, abort codes, hazards)

Note. For AC-130 employment, lines 5, 6, and 8 are mandatory briefing items. Remarks should also include detailed threat description, marking method of friendly locations (including magnetic bearing and distance in meters from the friendly position to the target, if available), identifiable ground features, danger close acceptance.

Time on target (TOT): "_____"

OR

Time to target (TTT): "Stand by _____ plus _____, Hack."

Figure 6-3. Close Air Support Briefing Form

FIRE SUPPORT COORDINATION MEASURES

6-57. Once established, FSCM are displayed on maps, firing charts, overlays, and stored in computers. Graphic portrayal includes, as a minimum, the visual code, the abbreviation for the measure, the establishing headquarters, and the effective date-time group. Often, the date-time group is shown as a from-to time. Usually, coordination measures are labeled at each end of a line or within the graphic, space

permitting. Both the graphics and the lettering are in black for all measures.

6-58. With the exception of boundaries, FSCM are either permissive or restrictive. In essence, the primary purpose of a permissive measure is to facilitate the attack on targets. A restrictive measure imposes certain requirements for specific coordination before the engagement of those targets affected by the measure. Therefore, the primary purpose of a restrictive measure is to safeguard friendly forces.

Permissive Measures

6-59. **Coordinated Fire Line**. A coordinated fire line (CFL) is a line beyond which conventional or improved conventional indirect fire (surface-to-surface fires only) means (mortars, field artillery, and NGF) may fire at any time within the zone of the establishing headquarters without additional coordination. The purpose of the CFL is to expedite the attack on targets beyond it. Usually, a brigade or a division establishes the CFL, but a maneuver battalion may establish it. It is located as close to the establishing unit as possible, without interfering with maneuver forces, to open up the area beyond to fire support. There is no requirement for the CFL to be placed on identifiable terrain. However, additional considerations include the limits of ground observation, the location of the initial objectives in the offense, and the requirement for maximum flexibility of both maneuver and the delivery of supporting fires. Higher headquarters may consolidate subordinate CFLs.

6-60. The CFL is graphically portrayed by a dashed black line followed by the establishing headquarters (brigade or division) in parentheses above the line and a date-time group below the line (see Figure 6-4). Locations for CFLs are disseminated by message and/or overlay through both maneuver and fire support channels to higher, lower, and adjacent maneuver and supporting units.

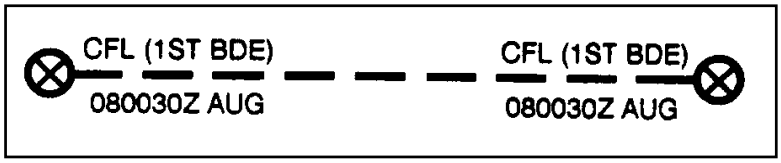


Figure 6-4. Coordinated Fire Line

6-61. **Fire Support Coordination Line.** A fire support coordination line (FSCL) is a line established and adjusted by the appropriate land or amphibious force commander within his unit's boundaries in consultation with superior, subordinate, supporting, and affected commanders (see Figure 6-5). Forces attacking targets beyond an FSCL must inform all affected commanders in sufficient time to allow necessary reaction to avoid fratricide, both in the air and on the ground. FSCLs facilitate the rapid attack of targets of opportunity beyond the coordination measure. Supporting elements may attack targets beyond the FSCL, provided the attack will not produce adverse effects on, or to the rear of, the line that may affect current tactical operations. The FSCL is used to coordinate all

fires of air, ground, or sea weapons systems using any type of ammunition against surface targets.

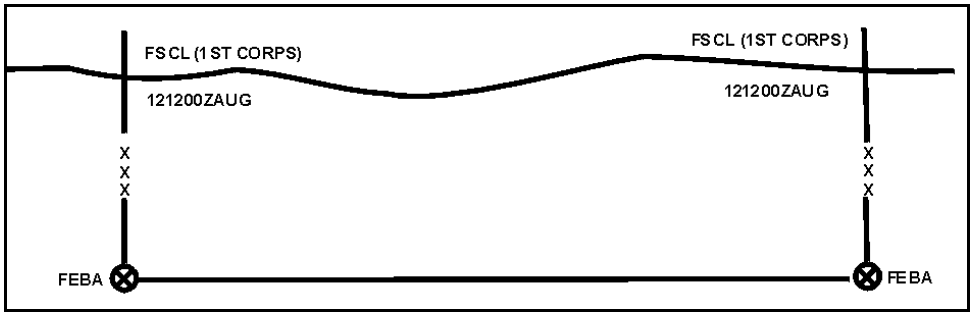


Figure 6-5. Fire Support Coordination Line

6-62. The FSCL is not a boundary. The synchronization of operations on either side of the FSCL is the responsibility of the establishing commander out to the limits of the land or amphibious force boundary.

6-63. The decision on where to place or even whether to use an FSCL requires careful consideration. If used, its location is based on estimates of the situation and concept of operations. Location of threat forces, anticipated rates of movement, weapons capabilities, and tempo of the operation, as well as other factors deemed appropriate, are considered in the commander's estimate. The FSCL is normally positioned closer to the FLOT in the defense than in the offense. The exact positioning of the FSCL is situation dependent; however, the FSCL should follow well-defined terrain features to ease identification from the air.

6-64. Establish an FSCL at sufficient depth to not limit high-tempo maneuver operations. FSCLs established at sufficient depth assist land or amphibious force commanders in easing the coordination requirements for attack operations within their AO by forces not under their control, such as naval gunfire. The FSCL is a term oriented to air-land operations; there is no similar term used at sea.

6-65. An associated benefit of employing an FSCL is the reduction in potential for fratricide. Short of an FSCL, the appropriate land or amphibious force commander controls all air-to-ground and surface-to-surface attack operations. Commanders employ restrictive measures to improve the protection of friendly forces operating beyond an FSCL.

6-66. Coordination of attacks beyond the FSCL is especially critical to commanders of air, land, and special operation forces. Their forces may operate beyond an FSCL or plan to maneuver on that territory in the future. Such coordination is also important when attacking forces employ wide area munitions or munitions with delayed effects. Finally, this coordination assists in avoiding conflicting or redundant attack operations. In exceptional circumstances, the inability to conduct this coordination will not preclude the attack of targets beyond the FSCL. However, failure to do so may increase the risk of fratricide and could waste limited resources.

6-67. The land or amphibious force commander adjusts the location of the FSCL as required to keep pace with operations. In high-tempo maneuver operations, the FSCL may change every few hours. The

establishing commander quickly transmits the change to higher, lower, adjacent, and supporting headquarters to ensure attack operations are properly coordinated. Anticipated adjustments to the FSCL are normally transmitted to other elements of the joint force sufficiently early to reduce potential disruptions in their current and near-term operations.

6-68. **Free Fire Area.** A free fire area (FFA) is a specific area into which any weapon system may fire without additional coordination with the establishing headquarters (see Figure 6-6). It is used to expedite fires and to facilitate the jettison of munitions when aircraft are unable to drop them on a target area. Usually, a division or higher commander establishes the FFA. It is located on identifiable terrain when possible or by grid designation when necessary. It is disseminated through both maneuver and fire support channels. Aircraft operations in an FFA may be extremely hazardous since there is no deconfliction from fires going into the FFA.

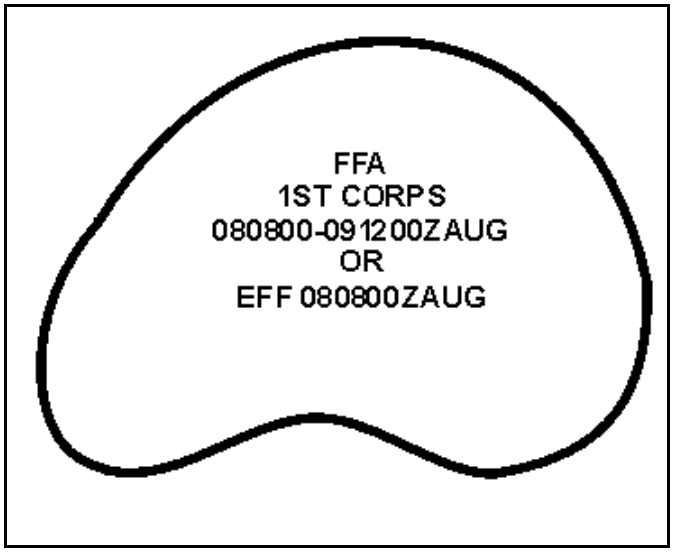


Figure 6-6. Free Fire Area

Restrictive Measures

6-69. **No Fire Area.** A no-fire area (NFA) is an area into which no fires or effects of fires are allowed (see Figure 6-7). Two exceptions are—

- When the establishing headquarters approves fires temporarily within the NFA on a mission-by-mission basis.
- When a threat force within the NFA engages a friendly force. The commander may engage the threat to defend his force.

6-70. The purpose of the NFA is to prohibit fires or their effects in the area. Usually a division or corps establishes NFAs. NFAs are normally on easily identifiable terrain. However, they may be located by grid or by a radius (in meters) from a center point. Like other fire support coordination measures, an NFA's location is disseminated through both maneuver and fire support channels to concerned levels.

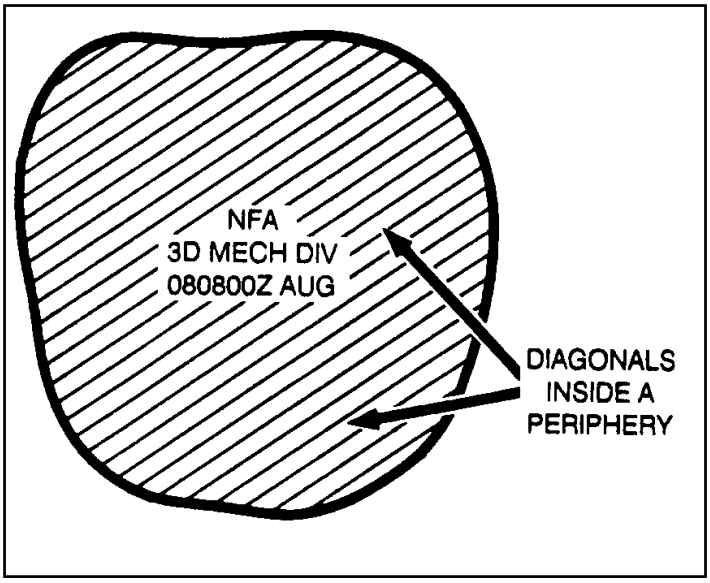


Figure 6-7. No Fire Area

6-71. **Restrictive Fire Area.** A restrictive fire area (RFA) is one in which specific restrictions are imposed and in which fires that exceed those restrictions will not be delivered without coordination with the establishing headquarters (see Figure 6-8). The purpose of the RFA is to regulate fires into an area according to the stated restrictions. Maneuver battalion or higher echelons of command establish it. On occasion, a company operating independently may establish an RFA. Usually, it is located on identifiable terrain, by a grid or by radius (in meters) from a center point. Its location is disseminated in the same manner as that of the coordinated fire line. Restrictions may be shown on a map or an overlay, or reference can be made to an OPORD that states the restrictions. RFAs are suited for aircraft operations since fires into an RFA can be controlled and deconflicted from the aircraft.

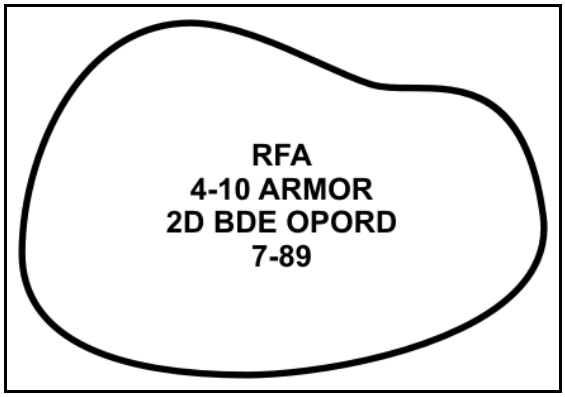


Figure 6-8. Restrictive Fire Area

6-72. **Restrictive Fire Line.** The restrictive fire line (RFL) is a line established between converging friendly forces (one or both may be moving) that prohibits fires or the effects of fires across the line without

coordination with the affected force (see Figure 6-9). The purpose of the line is to prohibit fires or the effects of fires across the line without coordination between the converging friendly forces. The commander common to the converging forces establishes it. Its location is disseminated in the same manner as that of a coordinated fire line.

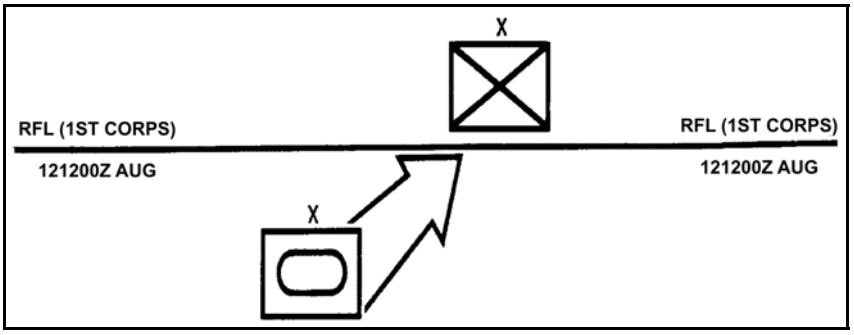


Figure 6-9. Restrictive Fire Line

6-73. **Airspace Coordination Area.** The airspace coordination area (ACA) is a block of airspace in the target area in which friendly aircraft are reasonably safe from surface fires (see Figure 6-10). Occasionally, it may be a formal measure (a three-dimensional box in the sky) or informal. The purpose of the ACA is to allow the simultaneous attack of targets near each other by multiple fire support means, one of which normally is air. For example, aircraft, FA, and NGF can attack the same target complex or targets close to one another while operating within the parameters of an established ACA.

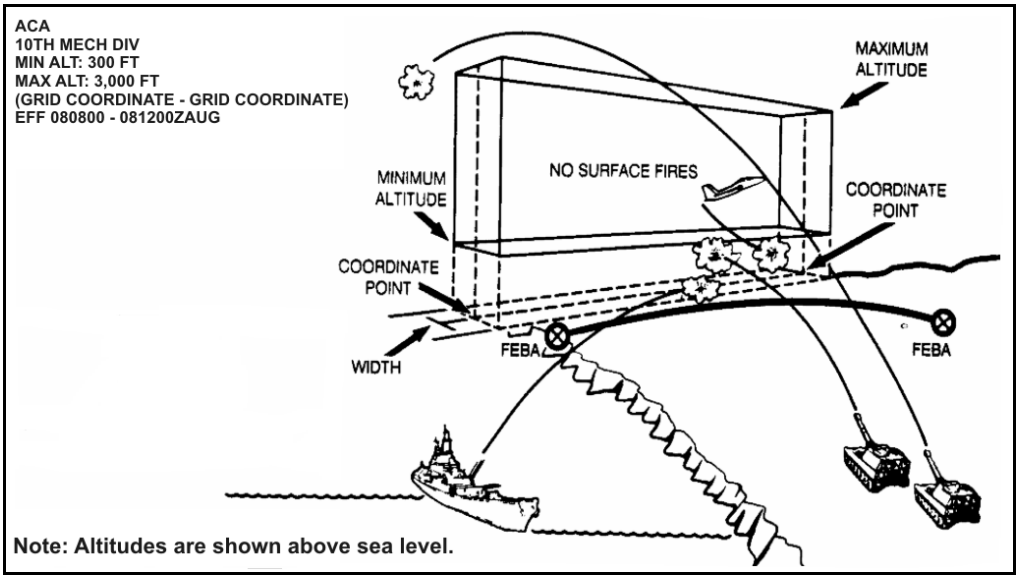


Figure 6-10. Airspace Coordination Area

6-74. Implementation of the formal ACA takes a significant amount of time. Therefore, informal ACAs are most often used and are the preferred method. The informal ACA can be established by using time, lateral

separation, or altitude to provide separation between surface-to-surface and air-delivered fires. An example would be to designate a road as the lateral separation feature, direct air support to stay north of the road, and restrict FA and NGF to airspace and targets south of the road. Normally, the informal ACA established at task force or higher level is temporary in nature and not usually displayed on maps, charts, or overlays.

6-75. Occasionally, there may be a requirement for a separate brigade or higher-level commander to establish a formal ACA. The FSE, the A2C2 element, and the fire direction center (FDC) coordinate the formal ACA location. It is located above the target area as recommended to the FSE by the air liaison element. The type of aircraft and the ordnance in use dictates the size of the area.

6-76. Vital information defining the formal ACA includes minimum and maximum altitudes, a baseline designated by grid coordinates at each end, the width (either side of the baseline), and the effective times. Information concerning the ACA is disseminated in the same way that it is for the coordinated fire line.

SECTION III - ARMY AVIATION

AIR CAVALRY

6-77. Air cavalry may be OPCON to the brigade or the cavalry squadron (RSTA) to augment reconnaissance troop operations. Troops and platoons must therefore be prepared to establish a close working relationship with air cavalry troops. Through its mobility and speed, air cavalry gives the troop commander added flexibility, increasing the speed with which reconnaissance is conducted. Refer to FM 3-20.95 [FM 17-95] and FM 3-04.114 [FM 1-114] for doctrine on air cavalry operations. See Figure 6-11 for air cavalry troop organization.

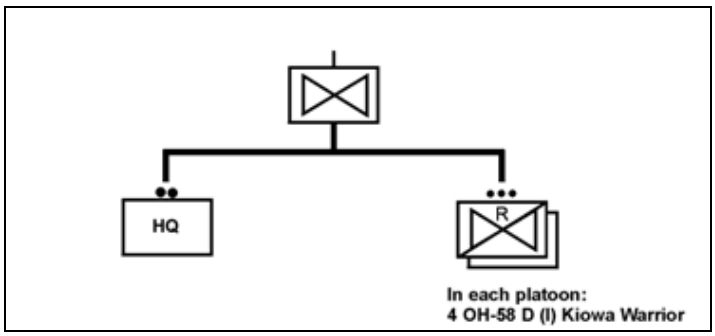


Figure 6-11. Air Cavalry Troop Organization

EMPLOYMENT CONSIDERATIONS

6-78. The aeroscout platoon consists of four aircraft, led by a lieutenant. It includes a flight examiner, instructor pilot, and individual aircraft pilots. Its primary mission is to conduct armed R&S missions.

6-79. The primary aircraft in air cavalry units is the OH-58D(I) Kiowa Warrior. This helicopter provides the maneuver commander with a versatile platform; it can be armed with various weapon systems and is suitable for employment in numerous types of situations and operations.

6-80. The aircraft features a stabilized mast mounted sight (MMS) with a low-light TV camera, thermal imaging system, and laser range finder/designator. The aircrew of the Kiowa Warrior can detect a heat source in day or night conditions at a range up to 15 kilometers and is capable of providing laser designation of targets for laser-guided munitions. In optimal conditions the Kiowa Warrior can detect targets at 15 kilometers, acquire targets at 10 to 15 kilometers, and identify targets from 5 to 8 kilometers.

NOTE: The Kiowa Warrior's detection and identification capabilities and its maximum operational and weapons ranges can be significantly affected by such factors as terrain, weather, and crew experience.

AIR-GROUND INTEGRATION

6-81. Effective integration of air and ground assets is required to successfully conduct cavalry operations. Each element (air and ground) brings unique capabilities and limitations to the cavalry commander. Integration starts at home station with the implementation of effective SOPs, habitual relationships, and air-ground team training. It continues through planning, preparation, and execution of the operation.

Fundamentals

6-82. To ensure effective integration, commanders and staffs must consider some basic fundamentals for air-ground integration. These fundamentals provide the framework for enhancing the effectiveness of both air and ground maneuver assets. In all cases, the commander must employ air cavalry assets as a maneuver force. The basic fundamentals are—

- Understanding capabilities and limitations.
- Use of SOPs.
- Command and control.
- Maximizing available assets.
- Employment methods.
- Synchronization.

Tactics, Techniques, and Procedures

6-83. Figures 6-12 through 6-17 show TTPs for integrated reconnaissance and stationary flank screen operations.

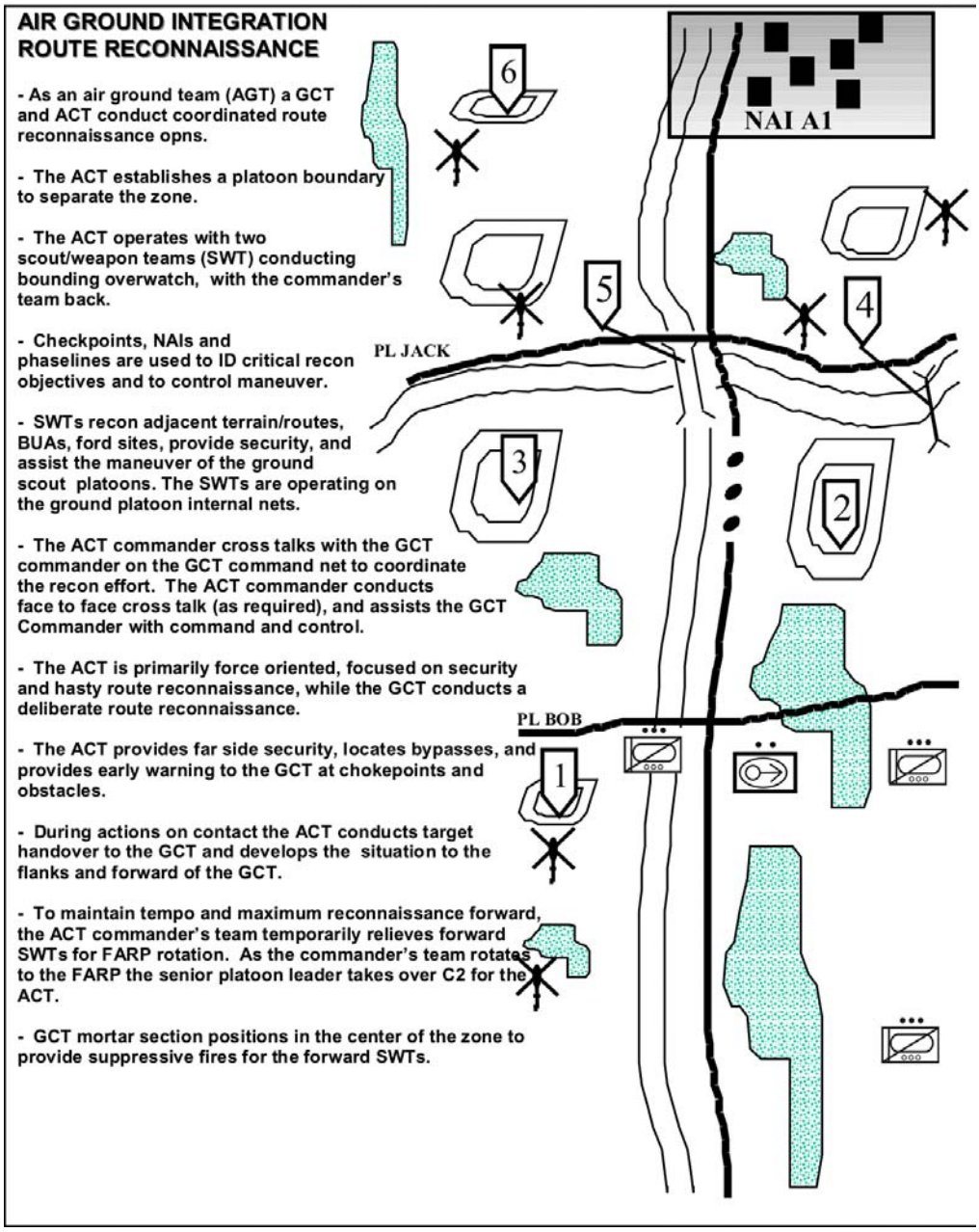

AIR GROUND INTEGRATION
ROUTE RECONNAISSANCE
- As an air ground team (AGT) a GCT and ACT conduct coordinated route reconnaissance opns.
- The ACT establishes a platoon boundary to separate the zone.
- The ACT operates with two scout/weapon teams (SWT) conducting bounding overwatch, with the commander's team back.
- Checkpoints, NAIs and phaselines are used to ID critical recon objectives and to control maneuver.
- SWTs recon adjacent terrain/routes, BUAs, ford sites, provide security, and assist the maneuver of the ground scout platoons. The SWTs are operating on the ground platoon internal nets.
- The ACT commander cross talks with the GCT commander on the GCT command net to coordinate the recon effort. The ACT commander conducts face to face cross talk (as required), and assists the GCT Commander with command and control.
- The ACT is primarily force oriented, focused on security and hasty route reconnaissance, while the GCT conducts a deliberate route reconnaissance.
- The ACT provides far side security, locates bypasses, and provides early warning to the GCT at chokepoints and obstacles.
- During actions on contact the ACT conducts target handover to the GCT and develops the situation to the flanks and forward of the GCT.
- To maintain tempo and maximum reconnaissance forward, the ACT commander's team temporarily relieves forward SWTs for FARP rotation. As the commander's team rotates to the FARP the senior platoon leader takes over C2 for the ACT.
- GCT mortar section positions in the center of the zone to provide suppressive fires for the forward SWTs.
NAI A1
PL JACK
PL BOB
1
2
3
4
5
6

Figure 6-12. Air-Ground Integration – Route Reconnaissance

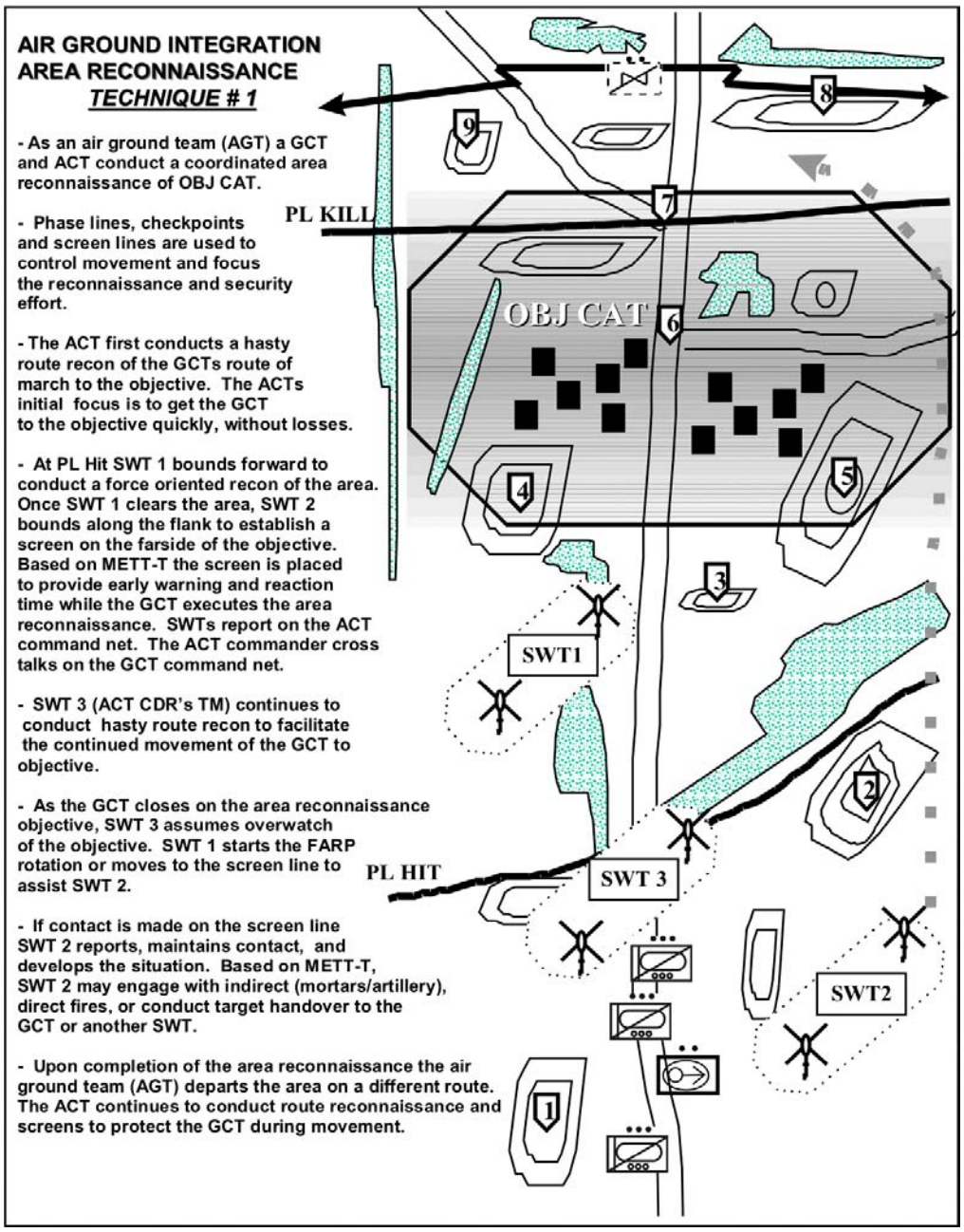

AIR GROUND INTEGRATION
AREA RECONNAISSANCE
TECHNIQUE # 1
- As an air ground team (AGT) a GCT and ACT conduct a coordinated area reconnaissance of OBJ CAT.
- Phase lines, checkpoints and screen lines are used to control movement and focus the reconnaissance and security effort.
- The ACT first conducts a hasty route recon of the GCTs route of march to the objective. The ACTs initial focus is to get the GCT to the objective quickly, without losses.
- At PL Hit SWT 1 bounds forward to conduct a force oriented recon of the area. Once SWT 1 clears the area, SWT 2 bounds along the flank to establish a screen on the farside of the objective. Based on METT-T the screen is placed to provide early warning and reaction time while the GCT executes the area reconnaissance. SWTs report on the ACT command net. The ACT commander cross talks on the GCT command net.
- SWT 3 (ACT CDR's TM) continues to conduct hasty route recon to facilitate the continued movement of the GCT to objective.
- As the GCT closes on the area reconnaissance objective, SWT 3 assumes overwatch of the objective. SWT 1 starts the FARP rotation or moves to the screen line to assist SWT 2.
- If contact is made on the screen line SWT 2 reports, maintains contact, and develops the situation. Based on METT-T, SWT 2 may engage with indirect (mortars/artillery), direct fires, or conduct target handover to the GCT or another SWT.
- Upon completion of the area reconnaissance the air ground team (AGT) departs the area on a different route. The ACT continues to conduct route reconnaissance and screens to protect the GCT during movement.
PL KILL
OBJ CAT
PL HIT
SWT1
SWT 3
SWT2
1
2
3
4
5
6
7
8
9

Figure 6-13. Air-Ground Integration – Area Reconnaissance (Technique 1)

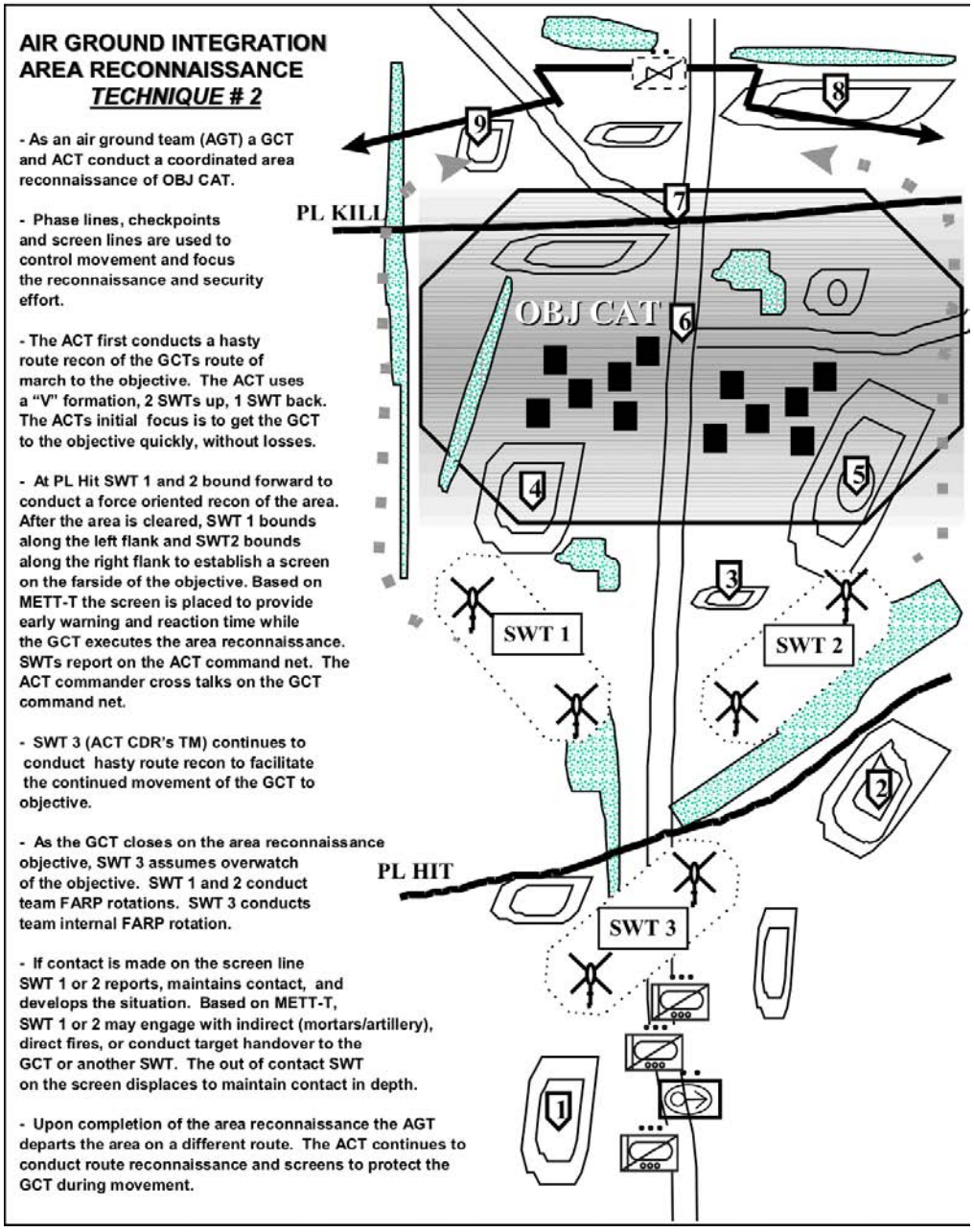

AIR GROUND INTEGRATION
AREA RECONNAISSANCE
TECHNIQUE # 2
- As an air ground team (AGT) a GCT and ACT conduct a coordinated area reconnaissance of OBJ CAT.
- Phase lines, checkpoints and screen lines are used to control movement and focus the reconnaissance and security effort.
- The ACT first conducts a hasty route recon of the GCTs route of march to the objective. The ACT uses a "V" formation, 2 SWTs up, 1 SWT back. The ACTs initial focus is to get the GCT to the objective quickly, without losses.
- At PL Hit SWT 1 and 2 bound forward to conduct a force oriented recon of the area. After the area is cleared, SWT 1 bounds along the left flank and SWT2 bounds along the right flank to establish a screen on the farside of the objective. Based on METT-T the screen is placed to provide early warning and reaction time while the GCT executes the area reconnaissance. SWTs report on the ACT command net. The ACT commander cross talks on the GCT command net.
- SWT 3 (ACT CDR's TM) continues to conduct hasty route recon to facilitate the continued movement of the GCT to objective.
- As the GCT closes on the area reconnaissance objective, SWT 3 assumes overwatch of the objective. SWT 1 and 2 conduct team FARP rotations. SWT 3 conducts team internal FARP rotation.
- If contact is made on the screen line SWT 1 or 2 reports, maintains contact, and develops the situation. Based on METT-T, SWT 1 or 2 may engage with indirect (mortars/artillery), direct fires, or conduct target handover to the GCT or another SWT. The out of contact SWT on the screen displaces to maintain contact in depth.
- Upon completion of the area reconnaissance the AGT departs the area on a different route. The ACT continues to conduct route reconnaissance and screens to protect the GCT during movement.
PL KILL
OBJ CAT
PL HIT
SWT 1
SWT 2
SWT 3
1
2
3
4
5
6
7
8
9

Figure 6-14. Air-Ground Integration – Area Reconnaissance (Technique 2)

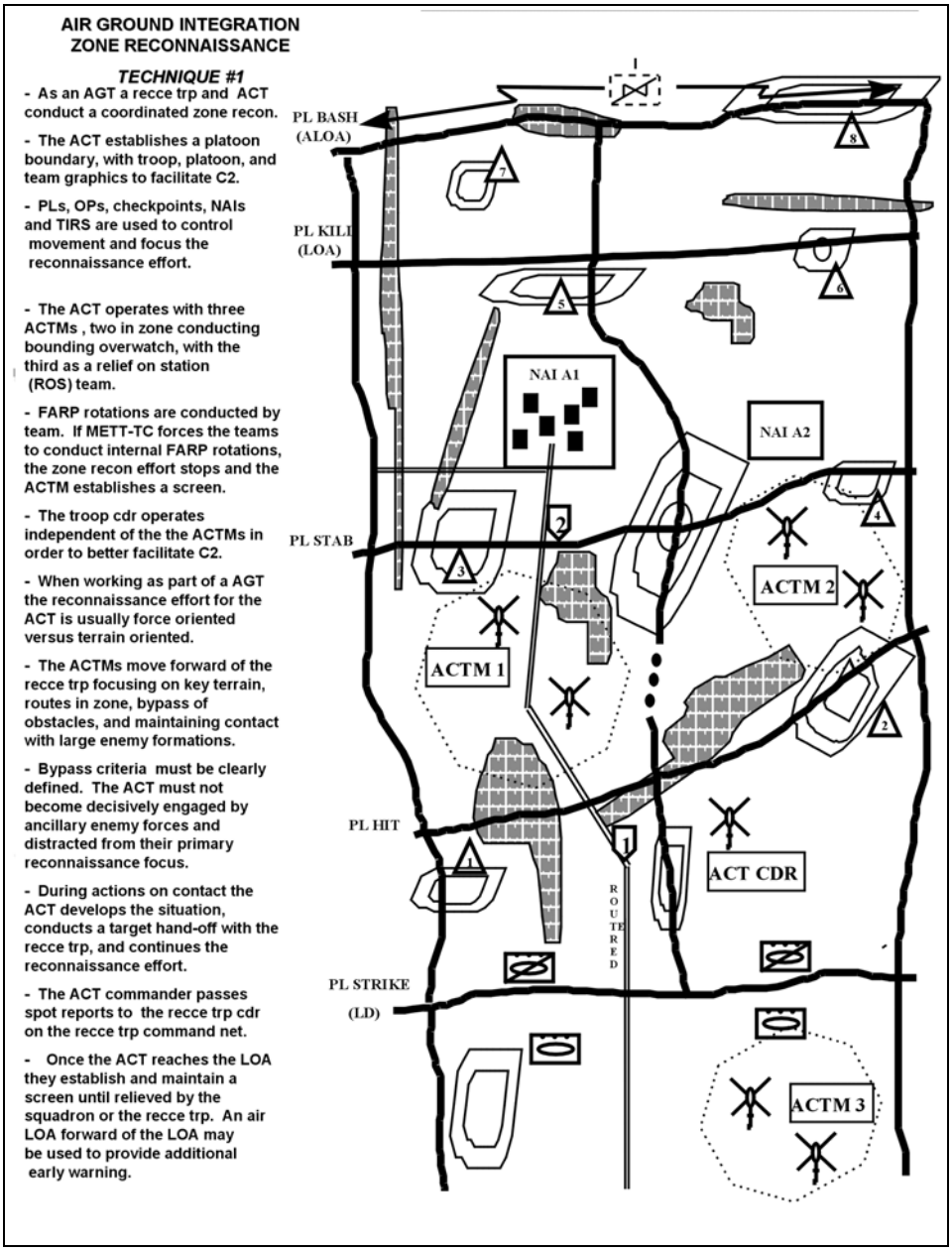

AIR GROUND INTEGRATION
ZONE RECONNAISSANCE
TECHNIQUE #1
- As an AGT a recce trp and ACT conduct a coordinated zone recon.
- The ACT establishes a platoon boundary, with troop, platoon, and team graphics to facilitate C2.
- PLs, OPs, checkpoints, NAIs and TIRS are used to control movement and focus the reconnaissance effort.
- The ACT operates with three ACTMs , two in zone conducting bounding overwatch, with the third as a relief on station (ROS) team.
- FARP rotations are conducted by team. If METT-TC forces the teams to conduct internal FARP rotations, the zone recon effort stops and the ACTM establishes a screen.
- The troop cdr operates independent of the the ACTMs in order to better facilitate C2.
- When working as part of a AGT the reconnaissance effort for the ACT is usually force oriented versus terrain oriented.
- The ACTMs move forward of the recce trp focusing on key terrain, routes in zone, bypass of obstacles, and maintaining contact with large enemy formations.
- Bypass criteria must be clearly defined. The ACT must not become decisively engaged by ancillary enemy forces and distracted from their primary reconnaissance focus.
- During actions on contact the ACT develops the situation, conducts a target hand-off with the recce trp, and continues the reconnaissance effort.
- The ACT commander passes spot reports to the recce trp cdr on the recce trp command net.
- Once the ACT reaches the LOA they establish and maintain a screen until relieved by the squadron or the recce trp. An air LOA forward of the LOA may be used to provide additional early warning.
PL BASH
(ALOA)
PL KILL
(LOA)
PL STAB
PL HIT
PL STRIKE
(LD)
NAI A1
NAI A2
ACTM 1
ACTM 2
ACTM 3
ACT CDR
ROUTE RED
1
2
3
4
5
6
7
8

Figure 6-15. Air-Ground Integration – Zone Reconnaissance (Technique 1)

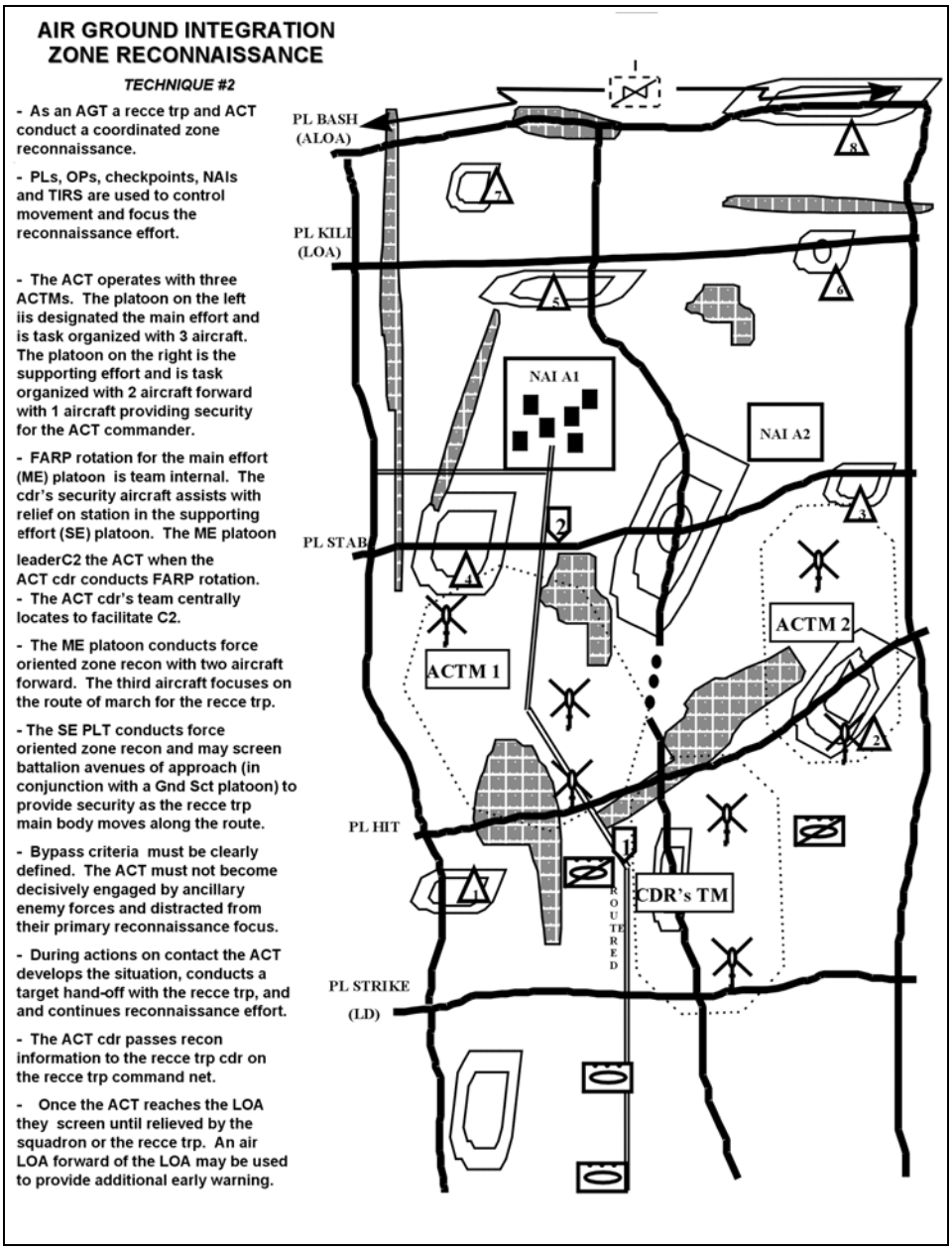

AIR GROUND INTEGRATION
ZONE RECONNAISSANCE
TECHNIQUE #2
- As an AGT a recce trp and ACT conduct a coordinated zone reconnaissance.
- PLs, OPs, checkpoints, NAIs and TIRS are used to control movement and focus the reconnaissance effort.
- The ACT operates with three ACTMs. The platoon on the left iis designated the main effort and is task organized with 3 aircraft. The platoon on the right is the supporting effort and is task organized with 2 aircraft forward with 1 aircraft providing security for the ACT commander.
- FARP rotation for the main effort (ME) platoon is team internal. The cdr's security aircraft assists with relief on station in the supporting effort (SE) platoon. The ME platoon leaderC2 the ACT when the ACT cdr conducts FARP rotation.
- The ACT cdr's team centrally locates to facilitate C2.
- The ME platoon conducts force oriented zone recon with two aircraft forward. The third aircraft focuses on the route of march for the recce trp.
- The SE PLT conducts force oriented zone recon and may screen battalion avenues of approach (in conjunction with a Gnd Sct platoon) to provide security as the recce trp main body moves along the route.
- Bypass criteria must be clearly defined. The ACT must not become decisively engaged by ancillary enemy forces and distracted from their primary reconnaissance focus.
- During actions on contact the ACT develops the situation, conducts a target hand-off with the recce trp, and and continues reconnaissance effort.
- The ACT cdr passes recon information to the recce trp cdr on the recce trp command net.
- Once the ACT reaches the LOA they screen until relieved by the squadron or the recce trp. An air LOA forward of the LOA may be used to provide additional early warning.
PL BASH
(ALOA)
PL KILL
(LOA)
PL STAB
PL HIT
PL STRIKE
(LD)
NAI A1
NAI A2
ACTM 1
ACTM 2
CDR's TM
ROUTE RED

Figure 6-16. Air-Ground Integration – Zone Reconnaissance (Technique 2)

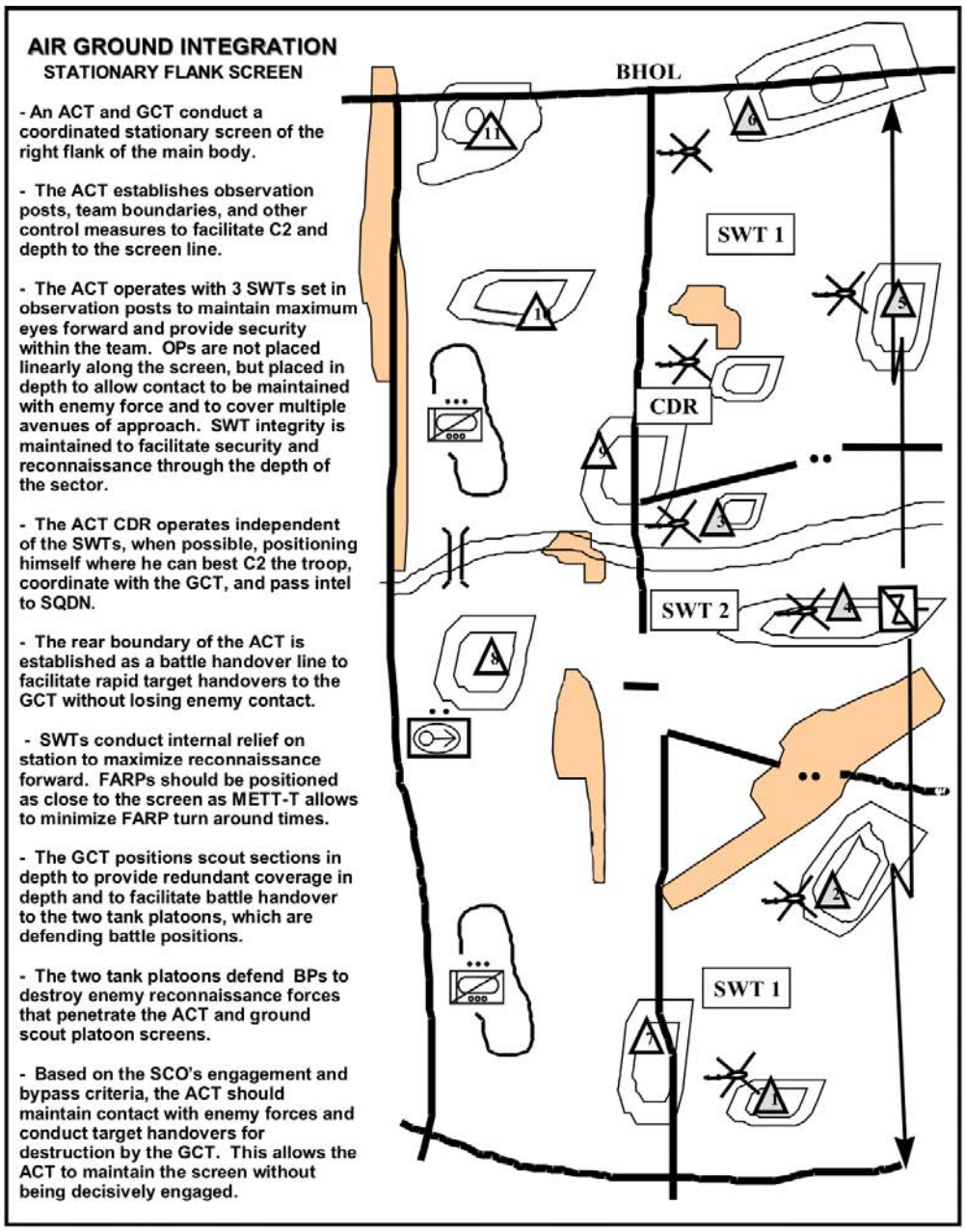

AIR GROUND INTEGRATION
STATIONARY FLANK SCREEN
- An ACT and GCT conduct a coordinated stationary screen of the right flank of the main body.
- The ACT establishes observation posts, team boundaries, and other control measures to facilitate C2 and depth to the screen line.
- The ACT operates with 3 SWTs set in observation posts to maintain maximum eyes forward and provide security within the team. OPs are not placed linearly along the screen, but placed in depth to allow contact to be maintained with enemy force and to cover multiple avenues of approach. SWT integrity is maintained to facilitate security and reconnaissance through the depth of the sector.
- The ACT CDR operates independent of the SWTs, when possible, positioning himself where he can best C2 the troop, coordinate with the GCT, and pass intel to SQDN.
- The rear boundary of the ACT is established as a battle handover line to facilitate rapid target handovers to the GCT without losing enemy contact.
- SWTs conduct internal relief on station to maximize reconnaissance forward. FARPs should be positioned as close to the screen as METT-T allows to minimize FARP turn around times.
- The GCT positions scout sections in depth to provide redundant coverage in depth and to facilitate battle handover to the two tank platoons, which are defending battle positions.
- The two tank platoons defend BPs to destroy enemy reconnaissance forces that penetrate the ACT and ground scout platoon screens.
- Based on the SCO's engagement and bypass criteria, the ACT should maintain contact with enemy forces and conduct target handovers for destruction by the GCT. This allows the ACT to maintain the screen without being decisively engaged.
BHOL
SWT 1
CDR
SWT 2
SWT 1

Figure 6-17. Air-Ground Integration – Stationary Flank Screen

ATTACK HELICOPTER SUPPORT

TECHNIQUES, TACTICS, AND PROCEDURES FOR AIR-GROUND INTEGRATION IN THE CLOSE FIGHT

6-84. A hasty attack in the close fight typically lacks proper coordination between air and ground elements to ensure mission success. Effective coordination between ground maneuver units and attack aviation assets will maximize the capabilities of the combined arms team, while minimizing the risk of fratricide. The key to enhancing air-ground coordination and the subsequent execution of the tasks involved begins with standardizing techniques and procedures. The end state is a detailed SOP for air and ground maneuver units that addresses hasty attacks in a close combat situation.

6-85. Effective integration of air and ground assets begins with the ground maneuver brigade. When the aviation brigade or task force receives a mission to provide assistance to a ground unit engaged in close combat and planning time is minimal, the initial information provided by the brigade in contact should be sufficient to get the aviation attack team out of the aviation tactical assembly area to a holding area for direct coordination. The attack teams employed in this procedure will be placed under operational control of the unit in contact. The air-ground coordination procedure contains five major steps.

- Maneuver brigade planning requirements.
- Unit close fight situation report (SITREP).
- Attack team check-in.
- Employment of aviation close fires (ACF).
- BDA/reattack.

6-86. The following discussion of this procedure includes sections on aviation employment considerations and maneuver brigade LNO coordination requirements, all which are pertinent to the employment of attack aviation in the close fight.

Step 1. Maneuver Brigade Planning Requirements

6-87. The maneuver brigade, through its aviation LNO, provides the necessary planning requirements to the aviation brigade headquarters (see Table 6-6). The initial planning and information to be passed to the aviation brigade headquarters includes the location of the holding area, along with an air axis, route, or corridor for entry and exit through the brigade and subordinate units' sectors.

6-88. The holding area should be in the sector of the unit involved in close combat. The holding area may be a concealed position or an aerial holding area that allows for final coordination between the attack team leader and the ground unit leader before the attack begins. It must be located within FM radio range of all units involved. Alternate holding areas, along with ingress and egress routes, must be designated if occupation is expected to last longer than 15 minutes.

6-89. The brigade also provides the call signs and frequencies or SINCGARS hop sets and/or COMSEC information regarding the unit in contact. If the unit is SINCGARS-equipped, the attack team must also have the common "time," which may be taken from global positioning

systems (GPS). In addition, the brigade provides a current situation update for its AO, and specifically, for the supported unit's AO. This will include a recommended EA, which will allow for initial planning for BPs or attack-by-fire/support-by-fire (ABF/SBF) positions and could possibly prevent unintentional overflight of threat positions.

Table 6-6. Minimum Brigade Planning Requirements

Current situation should include friendly forces location and situation, threat situation highlighting known ADA threat in the AO, and tentative EA coordinates.
Brigade/squadron-level graphics can be updated via MCS-P or radio communications. Update critical items, such as LOA, fire control measures, base maneuver graphics, to better integrate into the friendly scheme of maneuver.
Fire support coordination information, such as location of direct support artillery and organic mortars and call signs and frequencies.
Ingress/egress routes into the AO. This includes passage points into sector or zone, and air routes to the holding area.
Holding area for face-to-face coordination between the attack team and the brigade/squadron/unit in contact. A holding area equates to an assault position. It must be adequate in size to accommodate the number of aircraft assigned the mission and out of range of threat direct fire systems. It should also be out of threat mortar range.
Call signs/frequencies of the brigade/squadron in contact down to the unit in contact. Air-ground coordination must be done on command frequencies to provide situational awareness for all elements involved.
SINCGARS time hack.

Step 2. Unit Close Fight SITREP

6-90. En route to the holding area, the attack team leader contacts the unit on its FM command net to receive a close fight SITREP (see Table 6-7). This SITREP is used to verify the location of the holding area and to conduct additional coordination. The attack team leader receives an update from the unit on the threat and friendly situations. The unit also verifies frequencies and call signs of the unit in contact. By this time, the mounted BCT or squadron has contacted the troop commander to inform him that attack aviation is en route to conduct a hasty attack.

Table 6-7. Close Fight Situation Report

Threat situation, focusing on ADA in the AO, type of threat vehicles/equipment position (center mass), and direction of movement. If dispersed, provide front line trace.
Friendly situation, including location of troop in contact, its mission, and method of marking its position.
Call sign/frequency verification.
Holding area verification, if face-to-face coordination is used. A sign/countersign must be agreed upon, such as using a light/heat source to provide a recognizable signature, answered by either aircraft IR lights or visible light flashes to signify which aircraft to approach.

6-91. Table 6-8 shows simulated radio traffic as an example of what may occur during this step.

Table 6-8. Example Close Fight Situation Report

ATTACK TEAM	SQUADRON
"Bulldog 06, this is Blackjack 26, over"	
	"Blackjack 26, this is Bulldog 06, L/C, over"
"Bulldog 06, Blackjack 26 en route to HA at grid VQ 98454287, request SITREP, over"	
	"Blackjack 26, this is Bulldog 06, threat situation follows, Hardrock 06 is taking direct fire from a platoon-size armor element at grid VQ 96204362, Hardrock 06 elements are established on PL Nevada center mass VQ 96000050, holding area VQ 94004000 expect radio coordination only, contact Hardrock 06 on FH 478, over"

6-92. Upon receiving the required information from the squadron, the attack team leader changes frequency to the troop's FM command net to conduct final coordination before ingressing on attack routes to BPs or ABF/SBF positions (see Table 6-9 for example). Coordination begins with the troop commander and ends with the leader of the lowest-level unit in contact (platoon).

6-93. Regardless of which key leader the attack team leader coordinates with, the troop command net is the most suitable net on which both air and ground elements can conduct the operation. It allows all key leaders on the ground, to include the FIST chief and the attack team leader and his attack crews, to communicate on one common net throughout the operation. Operating on the command net also allows the attack team to request responsive mortar fire for either suppression or immediate suppression of the threat. The AH-64 and the AH-1 Cobra are limited to only one FM radio because of the aircraft configuration. The OH-58 is dual-FM capable, which allows the attack team leader to maintain communications with the troop as well as its higher headquarters or a fire support element.

Table 6-9. Example Radio Frequency Change

ATTACK TEAM	TROOP
"Hardrock 06, this is Blackjack 26 on FH 478, over"	
	"Blackjack 26, this is Hardrock 06, L/C over"

Step 3. Attack Team Check-in

6-94. Upon making initial radio contact with the ground maneuver unit in contact, the attack team leader executes a check-in consisting of its present location, which is normally the attack team ground or aerial holding area; the composition of the attack team; the armament load and weapons configuration; total station time; and the night-vision device capability of the attack team (see Table 6-10). In the event a ground holding area is not used due to METT-TC considerations, the attack team will select and occupy an aerial holding area within FM communications range until all required coordination is complete.

6-95. The attack team leader and ground unit's key leaders must consider the effects on friendly forces of the various weapons carried by the attack aircraft prior to target selection and engagement. Weapon systems and munitions selection for a given engagement is METT-TC dependent. Point target weapon systems, such as Hellfire or TOW, are the preferred system for engaging armor or hardened targets in the close fight. The gun systems and the 2.75-inch rockets are the preferred system/munitions for engaging troops in the open and soft targets, such as trucks and trench works. These area fire weapon systems pose a danger to friendly soldiers who may be in the lethality zone of the rounds or rockets. In this case, the leader on the ground must be very precise in describing the target he wants the aircraft to engage.

Table 6-10. Example Check-In Transmission

ATTACK TEAM	TROOP
"Hardrock 06, Blackjack 26 is currently holding at grid VQ 98454287, 2 Kiowa Warriors with 450 rounds of .50 cal, 2 Hellfires each, half hour station time, all aircraft are NVG and FLIR capable, over"	
	"Blackjack 26, Hardrock 06, stand by, over"
"Blackjack 26, roger"	

Step 4. Employing Aviation Close Fires

6-96. There are two methods of employing aviation close fires. ACF can be preplanned, using a face-to-face coordination method (see Table 6-11), or conducted as an immediate ACF (see Table 6-12), using only radio communications. Face-to-face coordination between the commander in contact and the attack team leader is preferred, but METT-TC will dictate the final method of coordination. A major benefit to face-to-face coordination is the ability to talk to the ground commander with a map available and to integrate into the ground scheme of maneuver. This also provides an opportunity for the members of the attack team to update their maps with the maneuver squadron's latest graphics.

Table 6-11. Face-to-Face Method of Employing Aviation Close Fires

PREPLANNED AVIATION CLOSE FIRES CHECKLIST
Threat situation, including specific target identification.
Friendly situation, including location and method of marking friendly positions.
Planned EA and BP and/or ABF/SBF positions.
Ground maneuver mission/scheme of maneuver.
Attack aircraft scheme of maneuver.
Fire coordination and fire restrictions.
Map graphics update.
Method of designating targets.
Request for ACF.

Table 6-12. Immediate Method of Employing Aviation Close Fires

REQUEST FOR AVIATION CLOSE FIRES
Friendly location (individual/unit requesting support).
Heading to target (MAG).
Distance to target (kilometers).
Target description.
Target coordinates.
Target designation method.
Flight hazards.
Restrictive fire control measures.
Threats, such as ADA.
Clearance for fires authority.
Remarks, as necessary.

6-97. **Preplanned Aviation Close Fires.** When employing preplanned ACF, the reconnaissance troop commander and attack team leader meet at the holding area and plan their attack after the flight check-in is received. To be considered preplanned, certain elements of coordination must be completed at the holding area. The target must be identified and its activity explained. The friendly force's positions must be identified on a map, with a method of visually marking those positions passed to the attack team. If not previously done, the EA must be verified or defined. After defining the EA, the attack team leader will establish BPs and/or ABF/SBF positions. The scheme of maneuver for the ground elements must be explained, including the commander's intent and description of what is considered the decisive point on the battlefield. With that information, the attack team will provide a supporting scheme of maneuver. Existing or required fire control measures must be planned for and used to minimize the potential for fratricide. Then key maneuver graphics that are required to support or understand the scheme of maneuver are passed between the ground commander and attack team leader. A method of designating targets, such as laser pointers or tracers, will also be discussed. After completing this coordination, the synchronized attack plan can be executed. Targets of opportunity will be attacked on a case-by-case basis, using the request for immediate ACF. Consideration of the time available for this planning is critical; ground and air commanders accept increased risk of holding area compromise if the position is maintained for more than 15 minutes. METT-TC will dictate the extent of preplanning that may be accomplished and the length of time the holding area may be occupied.

6-98. **Immediate Aviation Close Fires.** Use a request for ACF when employing immediate ACF (see Table 6-13). With immediate ACF, portions of the preplanned ACF checklist are omitted to provide fires in a timely manner. A basic update is provided and the attack aircraft are called forward from their holding area or aerial holding area with the request for aviation close fires. Whether the attack team uses a holding area or aerial holding area will be dictated by its ability to maintain FM communication with the ground element in contact. Once the flight

check-in has been received, the ground maneuver leader provides a situation update, METT-TC permitting, containing essential elements from the preplanned ACF checklist. The attack team maintains position at an aerial holding area or within a holding area. The ground maneuver leader succinctly outlines the concept of his ground tactical plan. This includes updates on threat composition, disposition, and most recent activities, particularly the location of air defense weapons. He also provides an update on the friendly situation, to include the composition, disposition, and location of his forces and supporting artillery or mortar positions. After providing this information, the ground maneuver leader uses the ACF request format for attack and for subsequent reattacks.

NOTE: To employ immediate ACF, essential elements from the planning checklist should be briefed via radio as a SITREP by the ground commander prior to a request for ACF.

Table 6-13. Example Request for Aviation Close Fires

ATTACK TEAM	TROOP
	"Blackjack 26, Hardrock 06, stand by for update, friendly platoon in contact located at VQ 96000050, marked by IR strobes, threat platoon-size armor element is 800 meters due north, there has been sporadic heavy machine gun fire and main tank gun fire into our position, fire appears to be coming from road intersection vic VQ 96204362, negative knowledge on disposition of threat ADA, I'll be handing you down to Hardrock 16 for the ACF request, over"
"Hardrock 06, Blackjack 26, good copy, standing by at HA for ACF request, over"	
	"Roger Blackjack 26, Hardrock 16 request follows, friendly location VQ96000050, 360 degrees to target, 800 meters, 2 T-80s at the road intersection, target location VQ96000850, PAQ-4 spot on, no friendlies north of the 00 grid line, low wires directly over our position, over"

6-99. After receiving a request for ACF, the attack team leader informs the ground unit leader of the BP and/or ABF/SBF position, or the series of positions his team will occupy to gain the best observation and fields of fire into the EA or target area. The BP or ABF/SBF position is a position from which the attack aircraft will engage the threat with direct fire. It includes a number of individual aircraft firing positions. It may be preplanned or established as the situation dictates. Size will vary depending on the number of aircraft using the position, the size of the EA, and the type of terrain. The BP and/or ABF/SBF position is normally offset from the flank of the friendly ground position, but close to the position of the requesting unit to facilitate efficient target handoff. This also ensures that rotorwash, ammunition casing expenditure, and the general signature of the aircraft does not interfere with operations on the ground. The offset position also allows the aircraft to engage the threat on its flanks rather than its front, and reduces the risk of fratricide along the helicopter gun-target line.

6-100. The attack team leader provides the ground maneuver unit leader with his concept for the team's attack on the objective. This may be as simple as relaying the direction the aircraft will be coming from or the attack route, time required to move forward from their current position, and the location of the BP. Only on completion of coordination with the lowest unit in contact does the flight depart the holding area for the BP. As the attack team moves out of the holding area, it uses nap of the earth (NOE) flight along attack routes to mask itself from ground threat observation and threat direct fire systems. The attack team leader maintains FM communications with the ground unit leader while he maintains internal communications on either his very high frequency (VHF) or ultra high frequency (UHF) net (see Table 6-14).

Table 6-14. Example Transmission During Attack

ATTACK TEAM	PLATOON
"Hardrock 16, Blackjack elements will attack from the southeast, turn on IR strobes at this time, we will establish a BP west of your position 50 meters, over"	
	"Blackjack 26, Hardrock 16, strobes on at this time, over"
"Roger Hardrock, Blackjack has your position, en route for attack 30 seconds, over"	
	"Hardrock 16, roger"
"Hardrock 16, Blackjack 26, engagement complete, 2 T-80s destroyed, over"	
	"Blackjack 26, Hardrock 16, roger 2 T-80s destroyed, end of mission, out"
NOTE: This scenario was written without friction, as though in perfect conditions. Grid locations may be difficult for the ground maneuver element to determine, depending on the intensity of the ongoing engagement. Actual FM communications between the ground and air may not work this well.	

Step 5. Battle Damage Assessment and Reattack

6-101. After completing the requested ACF, the attack team leader provides a BDA to the ground maneuver commander. Based on his intent, the ground maneuver commander determines if a reattack is required to achieve his desired end state. Requests for ACF can be continued until all munitions or fuel is expended. Upon request for a reattack, the attack team leader considers the effects on duration and strength of coverage he can provide the ground maneuver commander.

TARGET IDENTIFICATION AND FRIENDLY POSITION MARKING

6-102. Regardless of time available, ground and air commanders must thoroughly plan the method of target identification and marking friendly positions before starting a mission. The proximity of friendly forces to targets requires positive target identification and makes marking of friendly units especially critical. All ground and air participants must clearly understand the procedures, and fire support assets must be familiar with the friendly marking system. Accurate and detailed maps, charts, or imagery facilitates aircrew orientation to the friendly scheme of

maneuver. Positive air-to-ground communications are essential to coordinate and authenticate marks.

6-103. Visual signaling or marking positions helps determine the disposition of friendly forces. The signal or combination of signals is based on items commonly carried by ground maneuver units. The signals must be acquirable by the night-vision or thermal imaging systems on the aircraft and recognizable by the aircrew. Often, the simplest methods are the best. Traditional signaling devices, such as flares, strobes, and signaling mirrors, are quite effective.

6-104. Target marking, or orientation on threat positions, may also be accomplished by signaling. Common techniques include the use of smoke, laser pointers, or tracers. Other devices are available to aid in the recognition of friendly forces and equipment where the fluid tactical situation and intermingling of forces in the close fight may make identification difficult. The use of glint tape, combat identification panels (CIP), and infrared beacons assist in the clear identification of friendly ground forces. Ground lighting, thermal contrast, and intermediate obstructions influence the effectiveness of these devices.

6-105. Table 6-15 contains various methods of marking positions. Commanders should use this table as a reference, but not limit themselves to only these methods. Adapt methods to prevalent conditions at the time of attack.

6-106. Time permitting, attack aircraft may input a target grid into the aircraft GPS/inertial navigation system, which will provide fire control cues (range, heading, time) to the target. This will aid in quicker target acquisition and help distinguish friendly from threat. Because ACF missions may be “danger close” with short firing ranges, expect minimum tracking time and thus minimum time to optimize the sensor.

Table 6-15. Target and Friendly Marking Methods

METHOD	DAY/ NIGHT	ASSETS	FRIENDLY MARKS	TARGET MARKS	REMARKS
SMOKE	D/N	All	Good	Good	Easily identifiable, may compromise friendly position, obscure target, or warn of fire support employment. Placement may be difficult due to structures.
SMOKE (IR)	D/N	All/NVD at Night	Good	Good	Easily identifiable, may compromise friendly position, obscure target, or warn of fire support employment. Placement may be difficult due to structures. Night marking is greatly enhanced by the use of IR reflective smoke.
ILLUM GND BST	D/N	All	N/A	Good	Easily identified, may wash out NVDs.
SIGNAL MIRROR	D	All	Good	N/A	Avoids compromise of friendly location. Dependent on weather and available light and may be lost in reflections from other reflective surfaces (windshields, windows, water, etc.).
SPOT LIGHT	N	All	Good	Marginal	Highly visible to all. Compromises friendly position and warns of fire support employment. Effectiveness is dependent upon degree of urban lighting. May wash out NVDs.

Table 6-15. Target and Friendly Marking Methods (Continued)

METHOD	DAY/ NIGHT	ASSETS	FRIENDLY MARKS	TARGET MARKS	REMARKS
IR SPOT LIGHT	N	All NVD	Good	Marginal	Visible to all with NVGs. Less likely to compromise than overt light. Effectiveness dependent upon degree of urban lighting.
IR LASER POINTER (< 0.4 watts)	N	All NVG	Good	Marginal	Effectiveness dependent upon degree of urban lighting.
IR LASER POINTER (>0.4 watts)	N	All NVD	Good	Good	Less affected by ambient light and weather conditions. Highly effective under all but the most highly lit or worst weather conditions. IZLID-2 is the current example.
VISUAL LASER	N	All	Good	Marginal	Highly visible to all. Risk of compromise is high. Effectiveness dependent upon degree of urban lighting.
LASER DESIG-NATOR	D/N	PGM or LST equipped	N/A	Good	Highly effective with PGM. Very restrictive laser acquisition cone and requires line of sight to target. May require precoordination of laser codes.
TRACERS	D/N	All	N/A	Marginal	May compromise position. May be difficult to distinguish mark from other gunfire. During daytime use, may be more effective to kick up dust surrounding target.
ELEC-TRONIC BEACON	D/N	See remarks	Excellent	Good	Ideal friendly marking device for AC-130 and some USAF fixed wing (not compatible with Navy or Marine aircraft). Least impeded by urban terrain. Can be used as a TRP for target identification. Coordination with aircrews essential to ensure equipment and training compatibility.
STROBE	N	All	Marginal	N/A	Visible by all. Effectiveness dependent upon degree of urban lighting.
STROBE (IR)	N	All NVD	Good	N/A	Visible to all NVDs. Effectiveness dependent upon degree of urban lighting. Coded strobes aid in acquisition.
FLARE	D/N	All	Good	N/A	Visible by all. Easily identified by aircrew.
FLARE (IR)	N	All NVD	Good	N/A	Visible to all NVDs. Easily identified by aircrew.
GLINT/IR PANEL	N	All NVD	Good	N/A	Not readily detectable by threat. Very effective except in highly lit areas.
COMBAT ID PANEL	D/N	All FLIR	Good	N/A	Provides temperature contrast on vehicles or building. May be obscured by urban terrain.
VS-17 PANEL	D	ALL	Marginal	N/A	Only visible during daylight. Easily obscured by structures.
CHEMICAL HEAT SOURCES	D/N	ALL FLIR	Poor	N/A	Easily masked by urban structures and lost in thermal clutter. Difficult to acquire can be effective when used to contrast cold background or when aircraft knows general location.
SPINNING CHEM-LIGHT	N	ALL	Marginal	N/A	Provides distinct, unique signature. May be obscured by structures. Effectiveness dependent upon degree of urban lighting.
SPINNING CHEM-LIGHT (IR)	N	ALL NVD	Marginal	N/A	Provides unique signature. May be obscured by structures. Effectiveness dependent upon degree of urban lighting.

TELEVISION/ELECTRO-OPTICAL

6-107. TV/EO sensors are subject to many of the same limitations as the naked eye, particularly TVs without low-light capability. Aircrews may not be successful in acquiring a target and achieving lock-on if smoke, buildings, or other factors repeatedly interrupt their line of sight (LOS). Low-light or all-light TV/EO sensors may require frequent gain and filter changes to accommodate varying light levels. Normal means of target and friendly identification may prove ineffective. IR strobes or even overt strobes normally visible to TV/EO sensors may be lost in the light clutter. Laser pointers will suffer the same type of degradation. TV/EO resolution is typically not sufficient at medium and extended ranges to discriminate between a friendly position or a target and its surrounding urban features. Ground personnel may need to use more aggressive and overt means of identifying their position and that of the target if TV/EO sensors are used to identify, track, and engage targets.

LASER DESIGNATION

6-108. A major challenge for a gunner in a moving aircraft is achieving and keeping LOS with a target or friendly position. Laser designation requires uninterrupted LOS to identify and engage a target. Helicopters may use hover capabilities, but only in the most permissive environments. This may mean the lasing platform has to be very near the target, often within danger-close or weapon-arming distances, to keep the spot on the target until ordnance impact. Smoke from burning vehicles or other fires may drift across the laser-to-target line, causing laser dispersion.

6-109. Most laser designation platforms cannot actually see their laser spot on a target. Lasers are often boresighted to other supporting sensors like FLIR/TIS or TV/EO. If the supporting sensor cannot see a target, then the laser cannot effectively mark the target. Further, even though a FLIR/TIS may "see" a target, the laser may not be capable of guiding ordnance against it, since smoke invisible to the FLIR/TIS may attenuate the laser energy. For the wave length of the laser, the most important contributor to this nonselective scattering is water vapor or absolute humidity. The impact of humidity on FLIR/TIS performance is greater than its impact on the laser. In other words, if you can detect the target in clear air, then the laser should provide sufficient laser energy for seeker acquisition. A rule of thumb is if you detect a target with a visual sensor and consistently determine a range to it with a laser range finder, then you can likely designate it satisfactorily for a laser-guided weapon. For low and medium threats where sufficient time is available to use the FLIR/TIS to point the laser, the methods are simple. As the threat escalates and the time available for target acquisition shrinks, targeting with the FLIR/TIS becomes more difficult, and the accuracy of laser munitions delivery may be degraded significantly.

ASSAULT (UTILITY) AND CARGO (LIFT) HELICOPTER SUPPORT

RESUPPLY OPERATIONS

6-110. Aerial resupply operations provide the squadron/mounted BRT commander with a flexible, responsible means to resupply his force. Although limited by weather and threat air defense systems, aerial resupply enables the commander to bypass congested supply routes,

destroyed bridges, and most terrain obstacles to deliver supplies where they are most needed. At brigade level and below, aerial resupply is generally confined to helicopters.

Planning Considerations

6-111. Close coordination between all participants must occur. The entire mission is reviewed and all limitations and problem areas resolved. If a particular problem cannot be resolved, another mode of transport should be considered for the item of equipment that presents the problem.

6-112. Planning for aerial resupply must consider the following factors:

- Type/amount of cargo to be carried.
- Helicopter assets available.
- Sling/cargo net/cargo container requirements.
- Ground crew training requirements.
- Selection of the pickup zone (PZ)/landing zone (LZ).
- Integration into the tactical plan.
- Priorities of cargo/unit resupply.
- PZ/LZ security.

6-113. Helicopter resupply assets are limited. Internal to the division, the combat aviation company of the combat aviation brigade (CAB) provides the only organic utility helicopter support. Normally, corps aviation assets provide aerial resupply support. Requests for support are routed through the squadron S3 to the division G3 for action.

Reconnaissance Troop Responsibilities

6-114. The troop receiving the supplies is responsible for selecting, preparing, and controlling/securing the PZ/LZ. In addition to general PZ/LZ responsibilities, specific tasks to be accomplished are—

- Recovery and assembly of equipment and supplies.
- Training available ground crews to guide the aircraft in and derig the load.
- Coordinating with the supported (sending) unit for the control and return of that unit's slings, A-22 bags, and other items.
- Preparing, coordinating, and inspecting backloads (such as slings and A-22 bags) and having them ready for hookup or loading when the aircraft comes in.
- Providing limited weather observations such as wind velocity, direction, cloud cover, visibility, and approximate ceiling.
- Providing terminal guidance with appropriate advisories such as obstacles, wire hazards, threat situation, to include ADA.

Pickup Zone/Landing Zone Selection

6-115. The reconnaissance troop may be required to establish a PZ/LZ for resupply, extraction, or MEDEVAC. In addition, the troop may be tasked to establish its own PZ to conduct scout insertions in support of air assaults.

6-116. The selection of a usable PZ or LZ is extremely important. Logistical and tactical considerations must be analyzed and taken into account to ensure that the PZ or LZ is placed at the right spot to support

the ground unit. Determining vulnerability to air and ground attacks is key to the site selection. The area must also be accessible to the aircraft that are going to use the sites. The commander of the helicopter company, his designated LNO, or Pathfinder-qualified NCO/officer will make the final decision as to PZ/LZ acceptance.

6-117. **Size and Shape of the PZ/LZ.** As a general rule, the PZ/LZ must provide for 100 feet (30 meters) of separation between utility aircraft and 130 feet (40 meters) between cargo aircraft. It must have no obstructions, such as trees, stumps, bushes, and man-made objects, that could cause damage to the helicopter rotor systems or the load itself. The number of aircraft that will be using it at one time must be considered along with its use after dark. If night resupply is scheduled, a larger area is normally needed.

6-118. **Surface Condition.** The surface condition should be solid enough to prevent a helicopter or load from bogging down. Blowing dust, sand, gravel, or loose debris can cause injury to people as well as damage to equipment and aircraft. A helicopter cannot land on a site that has a slope of 15 degrees or more. Obstacles can be no more than 18 inches tall. Immovable obstacles must be clearly marked with a VS-17 panel or red chemlite.

6-119. **Approach/Departure Direction.** When carrying an external load, helicopters should use gradual approach and departure angles (not a vertical ascent or descent). The avenues of approach and departure for a PZ/LZ should be over the lowest obstacle in the direction of the prevailing winds. Arrival and departure obstacle clearance and wind direction are especially important when visibility is reduced. Table 6-16 shows an example of a terminal guidance radio transmission.

Table 6-16. Terminal Guidance Radio Transmission

AIRCRAFT	TROOP
"Hardrock 06, Comanchero 06 is 30 seconds inbound to your location, request terminal guidance, over"	
	"Comanchero 06, Hardrock 06, signal is displaced, over"(use prearranged signal method if possible)
"Roger Hardrock, Comanchero has red smoke, over"	
	"Hardrock 06, roger green smoke, be advised there is a large bolder at the far end of the LZ and a suspected ZSU 23-4 four kilometers to the east, over"

MEDICAL EVACUATION OPERATIONS

6-120. The reconnaissance troop will contact the brigade support battalion (BSB) medical company on the medical company command frequency for all ambulance requests. If unable to contact the medical company on its frequency, relay the request through the troop command frequency, using the standard nine-line air MEDEVAC request (Table 6-17). The medical company will prioritize the troop's request with all others to determine if air MEDEVAC is possible.

Table 6-17. Air Medical Evacuation Request (Nine Line)

The following information is required when requesting a MEDEVAC for casualties:

- **Location:** Grid coordinates will contain the six-digit grid location and be preceded by the 100,000-meter grid identification.
- **Radio/Frequency/Call Sign:** The frequency and call sign should be that of the radio at the site of the unit requesting the MEDEVAC.
- **Patient Category of Precedence:** Be prepared to classify the casualty's priority to be evacuated.
- **Urgent:** Within two hours to save life or limb.
- **Priority:** When casualty's medical condition will deteriorate and become urgent within four hours.
- **Routine:** Requires evacuation, but when casualty's condition is not expected to deteriorate for several hours.
- **Tactical immediate:** Evacuation needed, tactical situation permitting.
- **Special Equipment/Emergency Medical Supplies:** List requirements.
- **Number and Type of Casualties:** Self-explanatory.
- **Security of Pickup Site:** Describe conditions of security.
- **Site Marking:** Describe marking method used.
- **Patient Nationality and Status:** Self-explanatory.
- **NBC Contamination Area:** Give location of NBC contamination area.

6-121. The reconnaissance troop must—

- Prepare a suitable LZ for the MEDEVAC aircraft.
- Secure the LZ.
- Provide terminal guidance for the MEDEVAC aircraft.

6-122. The initial contact and terminal guidance transmission in Table 6-18 is an example of what may occur during a MEDEVAC operation.

Table 6-18. Medical Evacuation Transmission

MEDEVAC AIRCRAFT	GROUND MANEUVER PLATOON
"Hardrock 06, Dustoff 26 is 30 seconds inbound to your location, request terminal guidance, over"	
	"Dustoff 26, Hardrock 06, signal is displayed, over"(use method in 9 line request)
"Roger Hardrock, Dustoff has green smoke, over"	
	"Hardrock 06, roger green smoke, over"

SECTION IV- UNMANNED AERIAL VEHICLE PLATOON

6-123. The UAV platoon operates four UAV aircraft (12 hours of continuous coverage in a 24-hour period and a surge capability of 18 hours out of 24-hour coverage for a period of three days). The platoon consists of a headquarters element, a mission planning and control

section, a launch and recovery section with an attached maintenance team (see Figure 6-18).

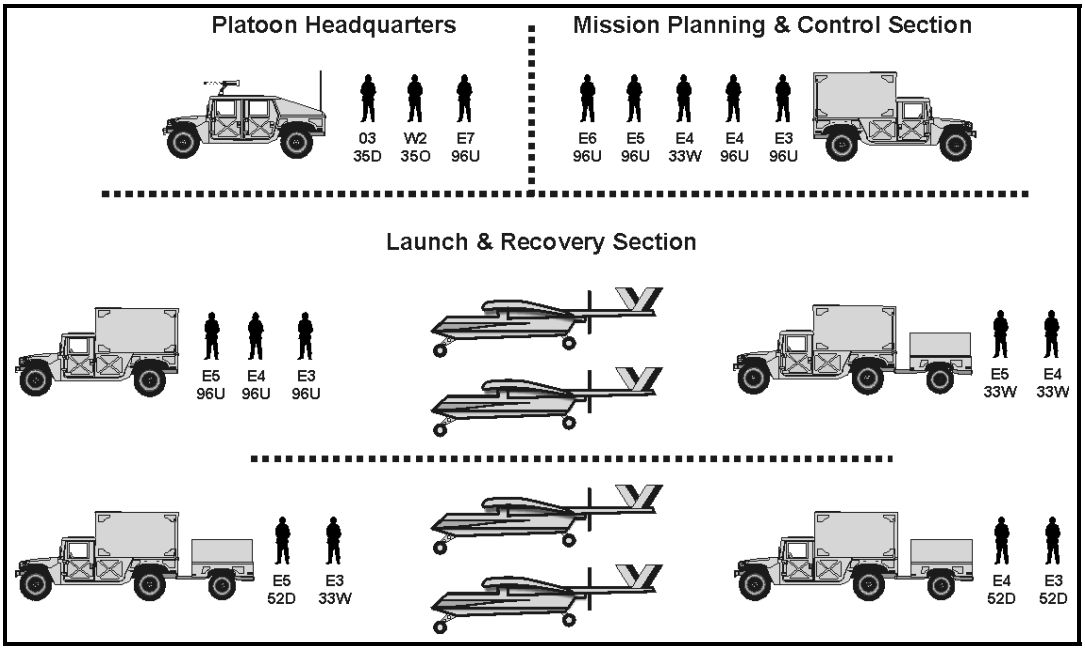


Figure 6-18. Unmanned Aerial Vehicle Platoon Organization

PLATOON HEADQUARTERS

6-124. The platoon headquarters collocates with the launch and recovery section. The headquarters ensures the subordinate teams are deployed, employed, and supported in accordance with the brigade/squadron OPORD and the troop commander's guidance. The headquarters performs mission planning and coordinates airspace coordination for UAV operations. Upon receipt of a mission or a mission change, the platoon headquarters plots the mission change as well as ingress and egress routes and makes sure the changes are accomplished safely and within operational parameters of the system. Additionally, the platoon headquarters coordinates UAV airspace requirements through the squadron S3 up to the brigade.

6-125. Missions are normally flown from a location in close proximity to the squadron CP. The platoon leader is responsible for locating suitable launch and recovery sites when new sites are required. The platoon headquarters plans the mission to collect the required information in a timely manner and submits flight requests to the squadron S3 for airspace deconfliction and integration into the air tasking order, special instruction, or the airspace control order.

GROUND PLANNING AND CONTROL SECTION

6-126. The section is normally collocated with the squadron CP to support situation development, reporting, and dynamic retasking of the UAV. The section operates a ground control station (GCS). The GCS has two primary functions. First, it is the primary means to control, track,

and operate the UAV. Second, it manipulates the payload and receives and processes telemetry and video downlinks from the UAV.

6-127. There are a variety of imagery sensors available for use on UAVs. Each sensor has a unique capability, with distinct advantages and disadvantages for each sensor. Sensors are currently limited to electro-optical and infrared. Additional payloads are currently under development and may be fielded as payload technology matures. Table 6-19 is a matrix of sensor characteristics for the types of sensors currently available on UAVs.

Table 6-19. UAV Sensor Characteristics Matrix

ADVANTAGES	DISADVANTAGES
ELECTRO-OPTICAL	
Affords a familiar view of a scene. Offers system resolution that cannot be achieved in other optical systems or in thermal images and radars. Preferred for detailed analysis and measurement. Offers stereoscopic viewing.	Can be deceived by employment of camouflage and concealment techniques. Restricted by weather conditions; visible light cannot penetrate clouds or fog. Restricted by terrain and vegetation. Limited to daytime use only.
INFRARED	
A passive sensor and is impossible to jam. Offers camouflage penetration. Provides good resolution. Night time imaging capability.	Not effective during thermal crossover (1 to 1.5 hours after sunrise or sunset). Tactical platforms threatened by threat air defenses. Bad weather degrades quality.

6-128. Control of the UAV during flight is effected through the GCS. After the external air vehicle operator (EAVO) at the launch site takes the aircraft off and it has climbed to an en route altitude, the EAVO transfers control of the UAV to the air vehicle operator (AVO) inside the GCS. The mission is flown with the AVO controlling the UAV via the C band microwave data link from inside the GCS shelter. The data link must maintain line of sight between the air vehicle and the GCS. The shelter can be located within the brigade or squadron TOC, allowing the supported commander to immediately effect a mission change. The GCS can also be located up to several kilometers away from the TOC. Communications between the GCS and the TOC is by landline or radio as provided by the supported unit.

6-129. The UAV platoon can also use the TROJAN SPIRIT tactical satellite system to send UAV video over extended ranges or from locations where the area communications networks are immature. When the GCS is not located with the TOC, a remote video terminal (RVT) is placed in the TOC. The RVT is a receiver-only terminal that allows the supported commander to view the down-linked video from the UAV. When the GCS is not collocated with a supported unit TOC, mission changes must be requested through the platoon headquarters via the supported unit to the GCS.

6-130. Reporting is normally performed through voice or data messages detailing observed activity. Reports are produced in the GCS and sent to the ASAS or other consumers as directed. The report flow will be through

normal intelligence reporting channels and will be in the SALUTE report format. This format is compatible with ASAS requirements and facilitates correlation and dissemination. Imagery analysts at the brigade S2 perform detailed analysis of UAV products as needed.

LAUNCH AND RECOVERY SECTION

6-131. The launch and recovery section is located at a site (road, soccer field, etc.) suitable for the launch and recovery of the UAVs. The section assembles and disassembles the air vehicle from storage containers. It performs the launch procedures for remote site rocket assist takeoff launches as well as normal launch preparation and recovery operations. It also performs maintenance of the runway areas and arresting cables.

6-132. Launch and recovery must be from an area easily accessible to the commanders, with rapid set-up and tear-down times, enabling it to keep up with the brigade's movement. To safely operate in the airspace within the brigade's AO and AOI, it is necessary to coordinate the use of the airspace and deconflict any potential problems with all other users and potential users.

MAINTENANCE TEAM

6-133. The maintenance team is collocated with the launch and recovery section. It is responsible for all major maintenance and repairs of the air vehicles, sensors and support vehicles, and generators. The team also performs normal fueling and defueling tasks as dictated by mission requirements.

SECTION V – GROUND SENSOR PLATOON

6-134. The ground sensor platoon consists of four IREMBASS/GSR sections (see Figure 6-19). The platoon depends on the ISR integration section located at the squadron CP for SIGINT mission management, technical support, and direction-finding analysis. See FM 2-00.21 [FM 34-2-1] or FM 3-20.96 for addition information on the capabilities, limitations, and TTP of IREMBASS and GSR.

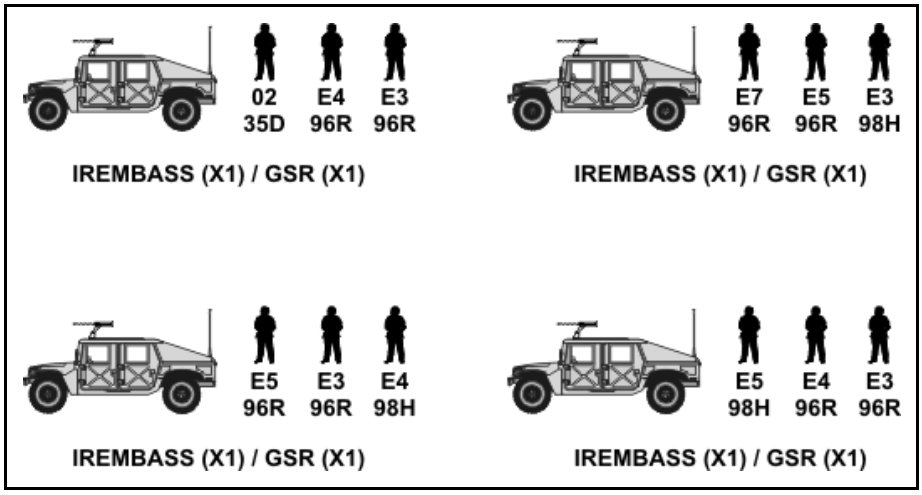


Figure 6-19. Ground Sensor Platoon

PLATOON LEADERSHIP

6-135. The platoon leadership consists of a platoon leader and a platoon sergeant. The element is integrated into the platoon during tactical operations. They work together to ensure the subordinate sections are deployed, employed, and supported in accordance with the squadron operation order and the surveillance troop commander's guidance. In accordance with standard troop-leading procedures, the platoon leader is responsible for coordinating the movement and link-up of platoon elements that the surveillance troop might attach to the recce troop.

IREMBASS/GSR SECTION

6-136. Based on METT-TC, the brigade/squadron may attach an IREMBASS/GSR system to operate in direct support of the troop. The direct support relationship increases situational awareness and capability of the recce troop to perform its missions, particularly during initial entry, cross-FLOT, and close battle offensive operations. In direct support, the IREMBASS/GSR system employs the tactics and techniques described for general support operations, but on a troop versus squadron or brigade scale.

IREMBASS/GSR TEAM

6-137. Each team is equipped with the AN/PPS-5D GSR and IREMBASS. The team emplaces its GSR and IREMBASS in areas of expected threat activity as directed in the squadron S2's ISR plan. The IREMBASS monitoring site is located within the team vehicle at the multi-sensor section position. The team prepares and submits a sensor activated SPOTREP and a SALUTE report to the ISR integration section, or if in direct support, to the recce troop CP. The team uses its systems to—

- Provide indications and warning of threat movement, reinforcement, or withdrawal.
- Provide near-real time combat information and targeting data.
- Confirm or deny movement along major supply routes, avenues of approach, or through specific NAIs.
- Support flank and rear security.
- Vector friendly forces to objectives during periods of visibility by monitoring their movement.
- Provide tip-off and cross-cueing of other sensors to support the brigade's targeting effort.

6-138. The team's IREMBASS is capable of detecting and classifying moving targets by responding to seismic acoustic disturbance, changes to the infrared energy, and magnetic field changes produced by the targets. IREMBASS uses remotely monitored sensors that are capable of detecting and classifying moving targets by responding to seismic acoustic disturbance, changes to the infrared energy, and magnetic field changes produced by the targets. Once a moving target activates the sensor(s), they send a burst of digital messages to the portable monitoring set/monitor-programmer and/or the sensor monitoring set/advanced monitoring display system. Based on the availability of line-of-sight, these digital messages are sent directly, or they go through a radio repeater.

NOTE: The system requires radio line of sight to transmit activations from the sensors to the monitor station. A radio repeater can extend the range by 15 kilometers on the ground and by 100 kilometers from the air.

6-139. The sensor monitoring set demodulates, decodes, temporarily displays, and provides a hard-copy printout of the sensor activity. The operator analyzes the sensor data and determines the type of target, number of targets, direction of travel, rate of speed, length of column, and last known location. With this information he prepares and submits a sensor activation SPOTREP directly or through combat net radio to the ISR integration section at the squadron or the supported unit.

6-140. The IREMBASS operator collects information using three types of sensors.

- **Magnetic Sensor.** The magnetic sensor is a count indicator sensor capable of detecting, counting, and determining the direction of travel when objects containing ferrous metal (iron) come within its detection radius.
- **Seismic Acoustic Sensor.** The seismic acoustic sensor is a classification sensor capable of detecting and classifying targets by ground vibrations and acoustic signals. The sensor classifies the target as personnel, vehicle, wheeled vehicles, tracked vehicles, and unidentified.
- **Infrared-Passive Sensor.** The infrared-passive sensor is a count indicator sensor capable of detecting, counting, and determining the direction of travel of a target by measuring the temperature change of the target against a steady thermal background.

6-141. The team hand-emplaces a string of three or more IREMBASS sensors along likely avenues of approach, choke points, and obstacles. The number of sensor strings depends on the area being covered. The first sensor is normally a seismic acoustic sensor for early warning and classification. The second sensor is normally a count indicator of the expected type of target—a magnetic sensor for vehicles and an infrared-passive sensor for personnel. The count indicator sensor provides the number of targets and direction of travel. A third sensor, also a count indicator, provides the rate of speed and length of column.

GROUND SURVEILLANCE RADAR TEAM

6-142. The team's AN/PPS-5D detects, locates, identifies, and tracks moving ground targets in an area under surveillance. The GSR detects moving ground targets only and cannot distinguish between threat and friendly targets. The team uses radar to search an area by one of four different modes of operation:

- **Search-Auto.** This mode is used for sector surveillance, with continuous scanning occurring automatically at a sector width of 800 to 1,000 mils or 1,600 to 2,000 mils. When operating in this mode, the radar set detects all targets within the surveillance area.
- **Search-Manual.** This mode is used to locate and track targets in any desired azimuth. Using a control switch, the operator can rotate the radar set to the left or right and stop it at any

azimuth. When operating in this mode, the radar set detects all targets within the surveillance area.

- **Search-Range.** This mode is used to locate and determine the range of selected targets. Operation of the RANGE control enables determination of target range.
- **Range Gate.** This mode is used to determine the precise range of targets detected in the other modes of operation. Only targets within 20 meters of the range displayed will be detected.

6-143. The team can operate the system up to nine meters from the vehicle or its battery power source. The operator evaluates the radar data to determine the type of target, number of targets, direction of travel, rate of speed, length of column, and last known location. With this information he prepares and submits a SPOTREP to the ISR integration section at the squadron or the supported unit.

SECTION VI – MULTISENSOR GROUND PLATOON

6-144. The multisensor ground platoon consists of a headquarters element, a control team, and three PROPHET sections (see Figure 6-21). The platoon depends on the ISR integration section located at the squadron CP for SIGINT mission management, technical support, and direction-finding analysis. See FM 2-00.21 [FM 34-2-1] or FM 3-20.96 for addition information on the capabilities, limitations, and TTP of SIGINT systems.

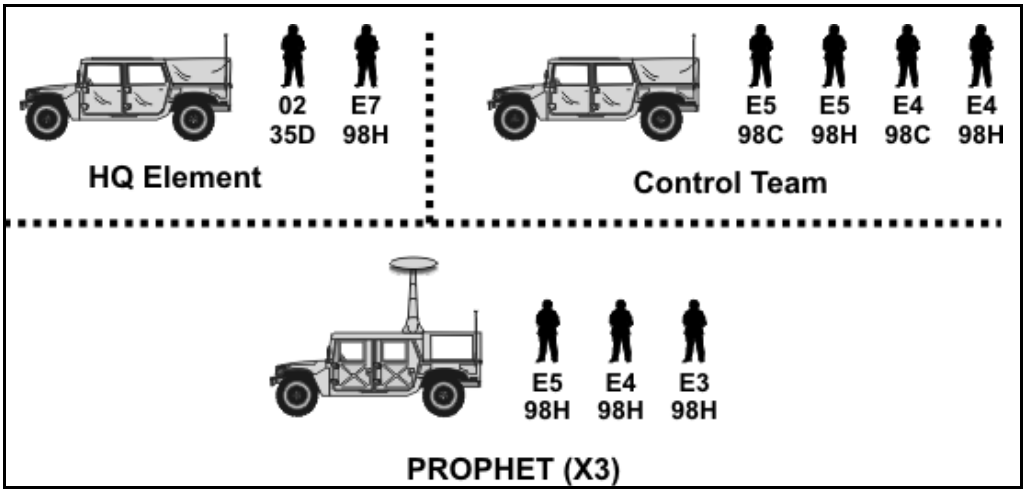


Figure 6-21. Multisensor Ground Platoon

HEADQUARTERS ELEMENT

6-145. The platoon headquarters consists of a platoon leader and a platoon sergeant. The element is integrated into the platoon during tactical operations. They work together to ensure the subordinate sections are deployed, employed, and supported in accordance with the squadron operation order and the surveillance troop commander's

guidance. In accordance with standard troop-leading procedures, the platoon leader is responsible for coordinating the movement and link-up of platoon elements that the surveillance troop might attach to the recce troop.

CONTROL TEAM

6-146. The control team consists of two signal analysts and two collection specialists. The section is normally collocated with the squadron CP to support situation development, reporting, and retasking of the PROPHET systems. Reporting is normally performed through voice or data messages detailing collection activity. Reports are produced and sent to the ASAS or other consumers as directed. The report flow will be through normal intelligence reporting channels and will be in the SALUTE report format. This format is compatible with ASAS requirements and facilitates correlation and dissemination. SIGINT analysts at the brigade S2 perform detailed analysis of SIGINT products as needed.

PROPHET (SIGINT) SECTION (COLLECTION TEAMS)

6-147. Each SIGINT team is equipped with the AN/PRD-13(V)2 PROPHET. The PROPHET system is capable of monitoring or scanning from 20 MHz to 2000 MHz, stop at detected signals, and restart after either a predetermined time or when manually cued by the operator. The system can filter selected signals. The receivers identify single channel digital and analog signals with modulations of AM, FM, single side band (SSB), and Morse/continuous wave (CW). The PROPHET system is capable of message internal exploitation of unencrypted tactical voice communications from single channel, push-to-talk emitters (see Figure 6-22).

Figure 6-22. PROPHET System

6-148. When mounted, PROPHET allows for early entry into the contingency area (force projection) to support force protection missions. In support of fluid mobile operations, the system has on-the-move capabilities, such as direction-finding (line of bearing) and signal

intercept exploitation capabilities. It has a stationary direction-finding accuracy of 15 degrees root mean square (RMS) and on-the-move accuracy of less than 22.5 degrees RMS. The PROPHET receives power from the vehicle's battery system. The power source for the system produces minimal thermal, electromagnetic, acoustic, and visual signatures. The PROPHET can use standard commercial power. A vehicular-mounted antenna is used to increase the system's intercept range. The PROPHET uses a quick erect antenna for stationary direction-finding operations. The PROPHET crew can set up the system and be fully operational for stationary direction-finding operations within 5 minutes. The crew can tear down the system from stationary operations to a fully operational on-the-move configuration within 3 minutes. The PROPHET system is C-130 drive-on/drive-off capable and can be sling-loaded by a UH-60.

6-149. The PROPHET can also be employed in a dismounted configuration. This configuration is similar to the low-level-voice-intercept teams found currently in light divisions. It can be broken down into man-transportable loads for deployment on foot and may be carried as part of a parachutist's load.

6-150. The dismounted PROPHET has a 72-hour battery supply and can be broken down into three 30-pound loads. The system withstands deployment in airborne operations. The crew can set up or tear down the dismounted PROPHET within 3 minutes. An operator can install the PROPHET into the vehicle within 5 minutes. The dismounted system is able to accept external standard commercial power.

6-151. The PROPHET operator can search, intercept, and locate signals from high frequency to super high frequency bands. The team can configure the system for employment under a number of mission conditions:

- **Local (manned).**
- **Remote (unmanned).** Using the 50-foot cable, operator-interface equipment is remoted to an alternate site for cover and concealment.
- **Stand-alone.** In the stand-alone mode, the PROPHET determines only line-of-bearing data of target emitters, and is *not* in a direction-finding net.
- **Man-pack.** Operator uses the MA-308 handheld antenna for intercept and direction finding.

6-152. The platoon deploys its systems so that the SIGINT teams can operate independently or as part of an integrated direction-finding baseline that supports the interception and location of threat emitters across the width and depth of the brigade AO. In a baseline, one SIGINT team normally collocates with the platoon CP and occupies the center position of the baseline. Each team in the baseline reports its signal data and lines of bearing using secure communications to the ISR integration section for evaluation and correlation into a fix (intersection of three or more lines of bearing).

6-153. The SIGINT teams deploy into one of three multistation direction-finding formations based on the mission, location of the threat, and terrain. A good baseline has a width that is approximately equal to the depth of coverage. In addition, the closer the SIGINT teams are to the

threat force or target, the better the direction-finding accuracy and the further their systems can intercept and locate threat targets. The terrain and location of the threat in relationship to the direction-finding baseline are the basis for formation selection.

- **Convex Baseline** is a multistation formation used when the threat forces are operating along a broad, deep front. This formation supports intercept coverage over a larger front, but not a precision location.
- **Concave Baseline** is a multistation formation used when the threat is operating in a compact, narrow, but deep, area like a salient. The direction-finding accuracy of this formation is excellent at short ranges and satisfactory at longer ranges.
- **Lazy-W Baseline** is a multistation formation that uses four or more systems and combines the characteristics of the convex and concave baselines. This formation is the most effective formation for situations where the location of threat or its main effort is unknown.

6-154. In reconnaissance operations the PROPHET may be tasked to support forward reconnaissance patrolling. In these types of missions, the PROPHET is primarily in an electronic support role to protect the patrolling assets and provide possible electronic order of battle in support of the reconnaissance effort. Reconnaissance assets normally operate very slowly. The PROPHET can also operate very slowly and in a blackout condition. When a signal of interest is detected, the operator notes the essential elements of information, and depending on immediacy, the vehicle commander reports this information to the leader of the reconnaissance mission, or holds the information until the mission is completed. The bottom line in this type of operation is that the PROPHET will operate very slowly either close to or across the FLOT in support of the reconnaissance effort.

SECTION VII - NUCLEAR, BIOLOGICIAL, AND CHEMICAL OPERATIONS

TROOP NBC DEFENSIVE OPERATIONS

6-155. In the event of NBC attacks, a well-planned NBC defense operation reduces casualties and contamination to equipment and material, which in turn minimizes confusion and interruption of the troop's mission. These operations are a command responsibility and are performed concurrently with combat operations to preserve the fighting strength of the troop. The troop's NBC defense personnel are an NBC trained officer (ideally the XO), an MOS-qualified NBC NCO, and an enlisted alternate.

6-156. The NBC officer supervises troop NBC defense activities and assists the commander in training NBC equipment operators. The NBC NCO and his alternate directly supervise radiological monitoring, chemical detection, and decontamination operations. During combat operations, the NBC NCO is located in the troop CP where he—

- Receives, prepares, evaluates, and digitally disseminates information on NBC attacks via FBCB2 and FM.

- Supervises employment of detection, monitoring, and surveying operations.
- Maintains unit radiation exposure status records.
- Assists the troop commander in analyzing guidance from the brigade/squadron for mission, threat, and weather as they affect NBC operations and recommends appropriate MOPP level based on this information.

6-157. To facilitate operations in an NBC environment, all soldiers must be proficient in operating the assigned NBC detection equipment. The troop SOP may designate teams for NBC operations based on MTOE equipment authorizations. See FM 3-11 (FM [M] 3-100) for detailed discussions on NBC techniques and procedures for operations in an NBC environment.

NUCLEAR, BIOLOGICAL, AND CHEMICAL RECONNAISSANCE

6-158. The various types of NBC reconnaissance platoons in the chemical force structure generally have the same capabilities, but differ in the number of NBCRS vehicles in each platoon. Augmentation with an NBC reconnaissance platoon provides a special reconnaissance capability and allows the performance of five critical tasks on the battlespace—detect, identify, mark, report, and sample. They conduct route, zone, and area reconnaissance to determine the presence and extent of NBC contamination. They can locate and identify life-threatening chemical warfare agents and radiological contaminants. The NBC reconnaissance platoon does not have a biological detection/identification capability, but they can take samples of suspected biological hazards for transfer to a Theater Army Medical Laboratory (TAML) for further analysis. See Figure 6-23 for an NBC reconnaissance platoon organization within the SBCT cavalry squadron (RSTA).

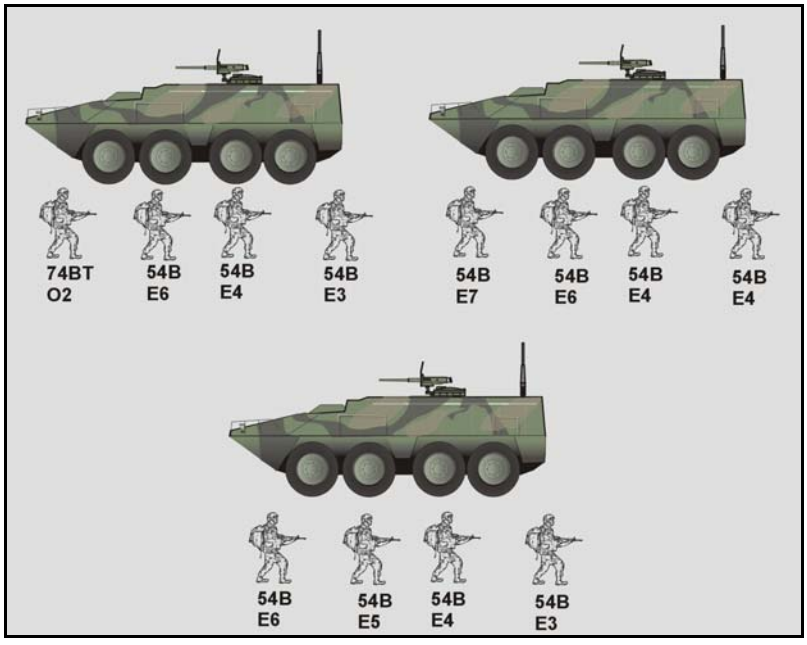


Figure 6-23. NBC Reconnaissance Platoon Organization within the SBCT Cavalry Squadron (RSTA)

6-159. The NBC reconnaissance platoon has some significant limitations with respect to area coverage, staff planning, and organic decontamination capabilities. The size of the AO in which the BCT is expected to operate presents a challenge to the platoon's ability to provide full coverage. Any determined effort by an adversary to employ NBC capabilities against the BCT will require chemical staff and unit augmentation.

6-160. The troop may be required to conduct NBC reconnaissance of routes or specific terrain features, using attached NBC reconnaissance sections. Security for this critical asset is always a concern, as is fratricide. Soldiers should always receive an FM warning when an NBC reconnaissance vehicle is entering their area.

6-161. For detailed discussion of NBC operations, refer to FM 3-11.3 (FM[M] 3-3), FM 3-11.4 (FM[M] 3-4), and FM 3-11.5 (FM[M]3-5).

SECTION VIII - BCT ENGINEER OPERATIONS

CAPABILITIES

6-162. The BCT engineer assets provide mobility, force protection, and topographic support to designated units within the brigade. Limited countermobility, survivability, and sustainment engineering capability are made possible using the same force structure required for a mobility mission. Engineers provide mobility support to mounted maneuver, dismounted assault, and urban operations. They are equipped with reduction assets for existing, natural, and reinforcing obstacles in open rolling terrain, and in challenging complex and urban terrain. Bridging assets provide the brigade with enhanced mobility for limited dry- and wet-gap crossing. Topographic capabilities, located in the Maneuver Support Cell, assist the brigade in acquiring situational awareness. Countermobility assets enhance the brigade's ability to preserve and protect friendly forces; to shape threat maneuver; and to gain, retain, or secure the positional advantage. The survivability capability preserves the brigade's combat power during assembly area and base camp operations and while in a transition to the defense. The sustainment capabilities provide the brigade with enhanced movement, maneuver, and force protection throughout the brigade area of responsibility. The engineer elements have no dedicated reconnaissance assets, but with measured risk to organic mobility and force protection support, it can provide engineer reconnaissance teams to augment the BCTs ISR assets and plans.

CONCEPT OF OPERATIONS

MANEUVER

6-163. Brigade engineers support the movement of combat forces to achieve a position of advantage with respect to threat forces. Mobility operations maintain freedom of movement for personnel and equipment within the AO without delay due to terrain, barriers, obstacles, or mines. Combat mobility platoons are task organized to maneuver battalions to provide mobility support to mounted maneuver, dismounted assault, and

urban operations. A mobility support platoon consists of three sections and provides the enabling equipment to facilitate freedom of maneuver, reduce force exposure to direct and indirect fires, and increase force effectiveness in complex and urban terrain. This platoon is used to enhance mobility capabilities based on METT-TC. The platoon may be used to weight the main effort. Sections can be tasked organized to the combat mobility platoons, or the mobility support platoon may be employed as an integral unit based on METT-TC.

6-164. Limited organic countermobility capabilities support planning, integration, and construction of reinforcing obstacles to attack the maneuver of a threat force, to increase time for target acquisition, and to mass and increase weapon effectiveness. Scatterable mines and submunitions assets provide capabilities in obstacle integration for close-in force protection, flank protection, and battlefield shaping in the decisive fight. Obstacle protection measures focus on counterreconnaissance to prevent the threat from gathering obstacle intelligence and obstacle reduction.

INTELLIGENCE

6-165. Brigade engineers provide a threat engineer and terrain knowledge in both asymmetric and symmetric environments. Topographical and engineer reconnaissance capabilities generate knowledge of products portraying the threat and environmental features needed for development of the real-time visualization of the battlefield. Topographical and reconnaissance capabilities include the collection and analysis of environmental information (weather and terrain and their impacts) on both friendly and threat operations. Ultimately, engineer intelligence capabilities integrated with reconnaissance assets provide tools to rapidly and accurately visualize the battlespace environments and their dynamics.

COMBAT SERVICE SUPPORT

6-166. Brigade engineer sustainment capability enhances force mobility in the forward AO through construction/repair of combat roads, trails, forward airfields, and landing zones. Organic engineer capabilities for the construction and maintaining of sustainment lines of communications are limited and require augmentation. This includes construction and maintenance of roads/trails, ports, and airfields, which connect forces with supply lines and reinforces movement. Organic engineer forces provide limited support for the construction or renovation of facilities. Echelons above division engineer forces are needed as augmentation for real estate support in identifying private and public property for use.

OFFENSE

6-167. Engineers provide a significant offensive capability to the force. Their primary mission is to provide enhanced mobility on the battlefield for the maneuver forces. To accomplish this, engineers conduct obstacle reduction and fortification reduction with organic systems, to include explosives and mechanical (mounted plows and rollers) and dismounted combat engineer soldier equipment. They normally task organize as combat mobility units and assets to the combined arms battalion. Engineers at all levels find or create a weak point in the threat's defensive obstacles and assist in suppressing the threat's fires, isolating the threat, maneuvering against weak points, and exploiting success.

6-168. Engineer assets assist in reconnaissance by developing a detailed threat obstacle template and ensuring that obstacle intelligence requirements are included in the ISR plan. Engineer reconnaissance teams or individual engineers with other reconnaissance elements can observe specific NAIs to gain information on terrain, obstacles, and areas for exploitation by maneuver forces.

6-169. In the offense, engineer elements can be task organized either with the security force, advance guard, main body, flank, or rear guard. Engineers support the attack by reducing obstacles to allow the advance guard to move into position to fix the threat. As the main body maneuvers, engineers emplace obstacles (VOLCANO, MOPMS) to protect the flanks and reduce obstacles to allow the main body to attack into the threat's position. The engineer company will be employed with the forward elements of the main attack. Engineer elements will accompany the combined arms battalion's breaching force and assist in reducing and crossing all obstacles encountered. Dismounted engineers conduct covert breaching to attack the threat's obstacle system (before the main attack) to gain surprise. Situational obstacles can be used behind the threat to prevent repositioning, to delay threat counterattacks, or to fix the threat in his defensive positions.

DEFENSE

6-170. When or if the combined arms battalion transitions into a defensive posture, its purpose is to conserve combat power for use elsewhere. The brigade's engineers have the capability to provide defensive support. Defensive security operations focus on providing early warning and disrupting the threat attack early and continuously. With inherent risk, engineers integrated with the reconnaissance and counterreconnaissance elements provide security through identification of threat engineer forces, assisting with friendly deception operations, and construction of friendly protective obstacles.

ORGANIZATION AND FUNCTIONS

6-171. The engineer company supports the maneuver force. It is ideally suited for integration into the maneuver operations at all levels. It is an agile organization that assures the freedom to maneuver on the battlefield within the combined arms team framework. Its structure and operational characteristics enhance force momentum and lethality and increase the synchronization of engineer actions within the maneuver battle space. The company consists of a company headquarters, three combat mobility platoons, and a mobility support platoon. The company can be organized to operate as an engineer-pure element, or task organized with platoons supporting maneuver forces (see Figure 6-24). For a review of the engineer company in support of a heavy organization and capabilities, refer to FM 3-90.2 (FM 71-2).

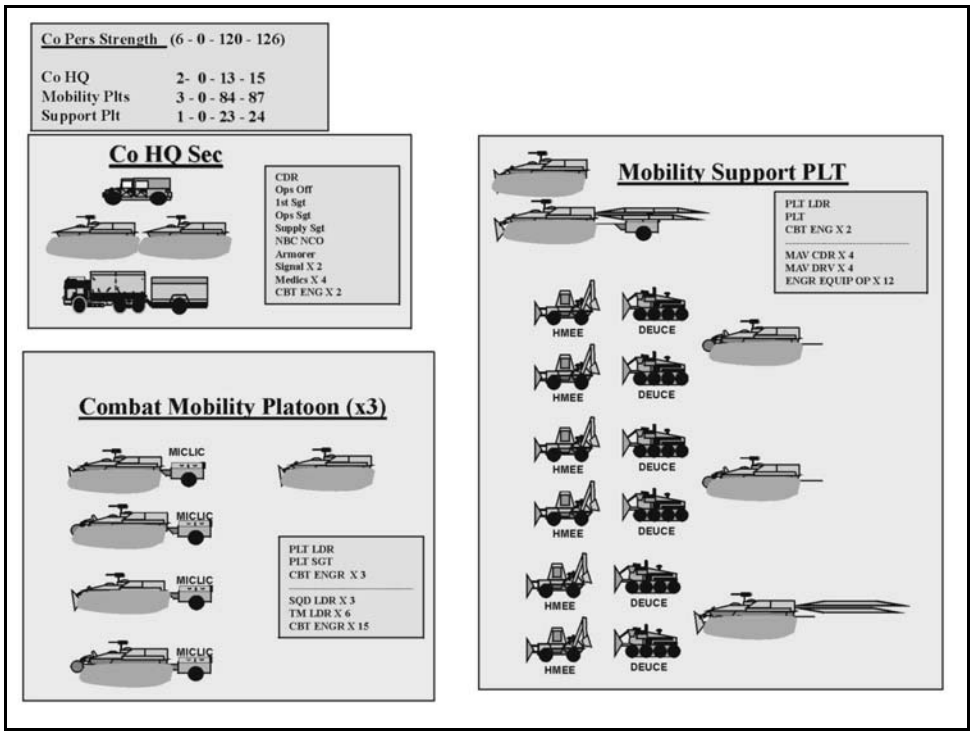


Figure 6-24. Engineer Company Organization (SBCT)

ENGINEER COMPANY HEADQUARTERS

6-172. The company headquarters commands and controls the unit's tactical employment and administrative operations. The company headquarters includes the commander, operations officer (also known as the XO), 1SG, operations NCO, supply sergeant, NBC sergeant, two communications specialists, two drivers, and four combat medics. The communication specialists and the medics are task organized to provide support to the platoons. All additional CSS is required through the FSB or the supported maneuver forces to which engineers are tasked organized. This includes all classes of supply, maintenance, administrative, recovery, and area MEDEVAC.

COMBAT MOBILITY PLATOON

6-173. The combat mobility platoon is normally the lowest-level engineer unit that can effectively accomplish independent missions and tasks. It is a basic unit capable of maneuvering during combat operations, and it can fight as part of the engineer company or as part of the maneuver company/team. The combat mobility platoon consists of a platoon headquarters section and three eight-man combat engineer squads. On the battlefield, the platoon can facilitate rapid and frequent movement. It is capable of fighting, both mounted and dismounted, during various situations. The combat mobility platoon frequently receives augmentation in the form of special equipment from the mobility support platoon. With risk to mobility, engineer squads can be task organized for specific missions such as engineer reconnaissance missions. Specific platoon equipment includes IAV with mountable rollers/blades and associated engineer equipment, demolitions, and weapons. The eight-man sapper

squad is the minimum force required to provide effective dismounted maneuver support.

MOBILITY SUPPORT PLATOON

6-174. The mobility support platoon consists of a platoon headquarters section and three equipment-based mobility sections. Like the combat mobility platoon, the mobility support platoon is not organized to operate independently on the offense. Each section is structured for mobility missions, focused on reducing threat obstacles and fortifications that inhibit friendly maneuver. The platoon provides the commander with specialized equipment capabilities to weight the main effort. Each section has breaching, gap-crossing, and lane-obstacle reduction capabilities as well as specialized vehicle-mounted tools and heavy blades. The same task organization and equipment required for mobility operations provide a limited capability for countermobility, survivability, and sustainment operations.

SECTION IX - AIR DEFENSE

6-175. Air defense actions include the passive and active measures employed by the troop to protect themselves from aerial attack. The commander must decide whether to engage threat aircraft (active air defense) based upon his assigned mission and the tactical situation. The following paragraphs are an overview of the passive and active air defense measures the troop may employ. Refer to FM 3-01.8 (FM 44-8) for further discussion on both passive and active air defense, and the techniques involved with each.

PASSIVE AIR DEFENSE

6-176. Passive air defense measures are the troop's best defense against hostile aircraft. These measures are of two types—attack avoidance and damage-limiting measures. Both include the use of cover, concealment, camouflage, and deception.

ATTACK AVOIDANCE

6-177. Attack avoidance means taking the actions necessary to avoid being seen by the threat—concealment and, lacking concealment, camouflage. The techniques, procedures, and materials used for concealment from aerial observation are the same as used for concealment from ground observation.

6-178. There are three concealment principles employed to minimize recognition.

- **Siting.** Siting means selecting the most advantageous position in which to hide a man, an object, or an activity.
- **Discipline.** Success in any concealment effort is the strict maintenance of concealment discipline by both the unit and by the individual soldier.
- **Construction.** Adding natural materials to blend with the surrounding terrain augments this type of concealment.

6-179. The three fundamental methods of concealing installations and activities are below.

- **Hiding.** Hiding is the complete concealment of an object by some form of physical screen.
- **Blending.** Blending is the arrangement or application of camouflage materials on, over, and around the object so that it appears to be part of the background.
- **Disguising.** Clever disguises can often mislead the threat concerning identity, strength, and intention, and may draw its fire from real assets.

6-180. The difference between concealment and camouflage is that concealment uses terrain to hide, and camouflage is constructing concealment. In addition to hiding equipment, camouflage glass surfaces and windshields with mud and unfilled sandbags.

DAMAGE-LIMITING MEASURES

6-181. Damage-limiting measures are an attempt to limit any damages if the threat detects friendly forces. These measures are used when the troop or its platoons are located in a static position, such as an assembly area, or when maneuvering. If caught in the open, vehicles should immediately execute battle drills and move to positions of cover and concealment that reduce the ability to be acquired or engaged. The same measures taken to limit damage from artillery attack are used—dispersion, protective construction, and cover.

- **Dispersion.** Dispersed troops, vehicles, and equipment will force the attacker to concentrate on a single small target that will likely be missed. While maneuvering, maintain safe distances among vehicles to reduce the effects of threat actions.
- **Protective Construction.** Protective construction is the use of cover, natural or manmade, to reduce damage and casualties. Digging in or sandbagging natural or manmade cover can offer additional protection from attack.
- **Cover.** Cover is the shelter or protection from threat observation that reduces the effects of threat direct or indirect fires. While stationary or maneuvering, select the available cover that will mitigate the effects of attack. Folds in the earth, natural depressions, trees, buildings, and walls all offer damage-limiting cover.

ACTIVE AIR DEFENSE

6-182. Although passive measures are the first line of defense against an air attack, the troop must be prepared to engage attacking threat aircraft. The decision to fight an air threat is based on the immediate situation and weapon system capabilities. Based on the mission, the troop will not typically engage aircraft except for self-preservation or as directed by the troop commander.

RIGHT OF SELF-DEFENSE

6-183. The right of self-defense is never denied. You may defend your unit from direct attack, but do not engage aerial platforms that are not attacking you except on the command of the next higher authority.

CREW-SERVED AND VEHICLE WEAPON SYSTEMS

6-184. Crew-served weapons and vehicle weapon systems provide a large volume and lethal means of engaging threat aircraft. When different munitions are available, use the currently loaded munition, and then reload with the appropriate munition to engage the aircraft.

SMALL ARMS USED FOR AIR DEFENSE

6-185. Small arms used for air defense incorporate the use of volume fire and proper aiming points according to the target. The key to success in engaging threat air is to put up a high volume of fire. The commander must decide whether to engage and issue the command for the entire troop to fire upon the attacking aircraft, not just individual soldiers firing at the aircraft.

FOOTBALL FIELD TECHNIQUE

6-186. The football field technique is a simple method of estimating lead distance. This technique is used to lead the target by a common distance (the length of a football field as the base). The aircraft will then fly into the volume of fire. Aiming points for jets and helicopters are summarized in Table 6-20. UAVs should be engaged using the helicopter aiming points.

Table 6-20. Football Field Technique of Estimating Lead

TYPE AERIAL PLATFORMS	COURSE	AIMING POINT
JET/CRUISE MISSILE	CROSSING	TWO FOOTBALL FIELDS IN FRONT OF AERIAL PLATFORM NOSE
JET/CRUISE MISSILE	OVERHEAD	TWO FOOTBALL FIELDS IN FRONT OF AERIAL PLATFORM NOSE
JET/CRUISE MISSILE	DIRECTLY AT YOU	SLIGHTLY ABOVE AERIAL PLATFORM BODY
HELICOPTER	HOVERING	SLIGHTLY ABOVE HELICOPTER BODY
HELICOPTER/UAV	DIRECTLY AT YOU	SLIGHTLY ABOVE HELICOPTER BODY
HELICOPTER/UAV	CROSSING	ONE HALF FOOTBALL FIELD IN FRONT OF NOSE

HELIBORNE INFANTRY AND PARATROOPERS

6-187. Infantry repelling from a hovering helicopter should be engaged by first destroying the helicopter with volume fire. Airborne troops are more difficult to engage because of their rapid descent. When engaging paratroopers, lead two body lengths below their feet. The Geneva Convention of 1949 and our rules of engagement prohibit engaging crewmen parachuting from a disabled aircraft.

Chapter 7

Urban Operations

CONTENTS

Fundamentals of Urban Operations 7-2
Characteristics 7-2
Urban Operations Framework 7-3
Understanding the Urban Environment 7-5
Terrain 7-6
Society 7-10
Infrastructure 7-10
Threat 7-10
Planning for Urban Reconnaissance 7-11
Planning Fundamentals 7-12
Planning Considerations 7-13
Execution of Urban Operations 7-20
Approach/Enter the Urban AO 7-20
Employ Surveillance Teams 7-22
Conduct Reconnaissance 7-24
Assess the AO 7-31
CSS Considerations 7-31
End State 7-32

Throughout history, military planners have viewed cities as centers of gravity and sources of national strength. Cities are population centers; transportation and communication hubs; key nodes of industrial, financial, and information systems; seats of government; and repositories of wealth. Because the US has worldwide interests that directly relate to global security, deployments into urban environments will likely become more frequent in order to neutralize or stabilize extremely volatile political situations, to defeat a threat force that has sought protection afforded by urban terrain, or to provide assistance to allies in need of support. Reconnaissance (recce) troops are essential to provide real-time information and situational awareness to defeat threat forces in the urban environment.

This chapter provides the tools necessary for planning and executing missions in an urban environment. Urban operations and reconnaissance in support of urban operations will follow the eight-step troop-leading procedures with emphasis on the special planning considerations of urban operations at the troop level. Additionally the commander's reconnaissance guidance will apply to reconnaissance in urban operations, but the emphasis will be on focus, tempo, and engagement criteria as they support the BCT's urban operations.

NOTE: The multidimensional aspect of reconnaissance is also conducted in permissive and semipermissive environments if executed by reconnaissance platoons augmented with supporting ISR assets for this mission focus.

SECTION I - FUNDAMENTALS OF URBAN OPERATIONS

CHARACTERISTICS

7-1. Urban operations are among the most difficult and challenging missions a troop will undertake. In conducting urban operations, the troop's higher headquarters applies the fundamentals below that may effect troop operations.

CONDUCT AGGRESSIVE ISR OPERATIONS

7-2. Urban operations require significant HUMINT reconnaissance, as sensors and other technical devices are not as effective in urban environments. The troop uses stealthy surveillance teams, tactical questioning of noncombatants, and reconnaissance of key terrain and avenues of approach to conduct ISR operations. The troop collects and provides information to develop urban maps that include a common reference system (such as numbering buildings).

UNDERSTAND THE HUMAN DIMENSION

7-3. The higher headquarters must carefully consider and understand how to influence the allegiance and morale of the civilian population that may decisively affect operations. The human dimension may have the most significance and greatest potential for affecting the outcome of urban operations. The troop's HUMINT collection may provide the BCT with the initial contact and primary information needed to make timely decisions.

SEPARATE NONCOMBATANTS FROM COMBATANTS

7-4. Separating noncombatants from combatants facilitates urban operations by reducing some of the restrictions on firepower and enhances force protection. Using intelligence and other information, the troop can diminish some of the threat's advantages. Troops may be required to interact with nongovernmental organizations (NGO) to separate and control refugee flow.

AVOID THE ATTRITION APPROACH

7-5. BCTs that conduct urban operations that use linear and methodical COAs based on firepower normally result in high casualties and significant collateral damage. Troops should only consider this approach when attempting to gain contact or fix threat forces as part of a larger operation. The troop focuses on providing information that enables the BCT to make decisions to avoid this type of situation.

CONTROL WHAT IS ESSENTIAL

7-6. The BCT focuses its efforts on controlling only those areas that are essential to mission accomplishment. The troop identifies key terrain that may be determined by its functional, political, or social significance.

MAXIMIZE EFFECTS WITHOUT UNNECESSARY COLLATERAL DAMAGE

7-7. Troops conduct aggressive ISR operations to provide information to the BCT commander to develop situational understanding. Using the situational understanding, COAs are developed that maximize the effects of lethal and nonlethal fires without inflicting unnecessary collateral

damage. The troop conducts target acquisition and adheres to firepower restrictions, as necessary, that will allow for mission accomplishment.

CONDUCT CLOSE COMBAT

7-8. Closing with and defeating the threat is required to be decisive in urban operations. The troop assists in shaping the urban area for the BCT through aggressive ISR.

TRANSITION CONTROL

7-9. The end state of urban operations is when control is transferred to civilian or other agency's control. The troop supports the BCT's transition plan to ensure restoration of peaceful conditions and avoid further disruption to the stability of the AO.

URBAN OPERATIONS FRAMEWORK

7-10. Divisions and above plan the operational level of urban operations and have the primary responsibility of setting the conditions for tactical success. A framework used to visualize and conceptualize UO is—

- Assess.
- Shape.
- Dominate.
- Transition.

7-11. The reconnaissance troop supports the BCT as it conducts each phase of urban operations.

ASSESS

7-12. The troop conducts aggressive ISR to provide the BCT with intelligence that impacts current operations. It identifies relevant forces, their strengths and vulnerabilities, and critical nodes of the urban area that provide leverage if controlled. The troop identifies noncombatants through HUMINT collection. This allows the BCT to determine whether or not to establish a limited civil military operations center (CMOC) to plan and prepare to deal with noncombatants, NGOs, and international agencies. The troop answers information requirements (IR) to enable the BCT to conduct urban mapping. Some of the IR the troop focuses on are—

- Where are the threat's critical C2 nodes located?
- What is the status of the key lines of communications leading into and within the urban area?
- Where are the diplomatic embassies and missions located within urban areas?
- What is the location and status of tunnels within the urban areas?
- What are the likely threat withdrawal routes and chokepoints?
- What are the potential vulnerabilities to infrastructure facilities?
- Where are the cross-mobility corridors within the urban area located?
- Where are the cultural, political, and symbolic facilities located?

- Are there any American citizens or Third Country Nationals that need to be extracted?
- Are there any American citizens or Third Country Nationals being detained against their will? If so, where?
- How do locals view us?
- What is the availability of maps and charts for the AO or AOI?
- What are the locations and status of hospitals and key personnel?
- Are there obstacles impeding movement along the routes to and from assembly areas?
- Is there any opposition from the national criminal enterprise?

SHAPE

7-13. The troop supports shaping operations by providing accurate and timely intelligence to the BCT. The intelligence allows the BCT commander to determine the extent and manner in which his forces can isolate the outlying urban AO. The troop supports isolation by employing sensors and recce platoons along avenues of approach to detect threat forces as they attempt to enter or leave the AO. The BCT can engage these forces with indirect fires, aerial fires, or a combination of the two, consistent with ROE. This technique may be effective in detecting and stopping large threat units from entering or leaving.

DOMINATE

7-14. Domination is achieved when all mission requirements are achieved and preeminent military control over the threat, geographical isolation, or population is established. The troop provides intelligence to the BCT which allows the BCT commander to determine techniques for conducting urban operations—

- Search and attack technique.
- Attack on a single axis.
- Attack on multiple axes.
- Cordon and attack.
- Fix and bypass.
- Multiple nodal attacks.

TRANSITION

7-15. During the transition phase, the recce troop may move from combat operations to stability operations and/or support operations. ISR operations continue during this phase and may focus more on noncombatants and displaced civilians. The troop interacts with NGOs and private organizations during transition. The troop will consolidate, reorganize, and conduct area protection while preparing for follow-on missions.

SECTION II - UNDERSTANDING THE URBAN ENVIORNMENT

7-16. Whether a metropolis or a village, each urban environment has an identifiable system of components that constantly change and interact. This environment consists of the *terrain*, the *society*, and the *infrastructure* that links the two. During combat operations, stability operations, or support operations, a fourth element, *the threat,* is added (see Figure 7-1).

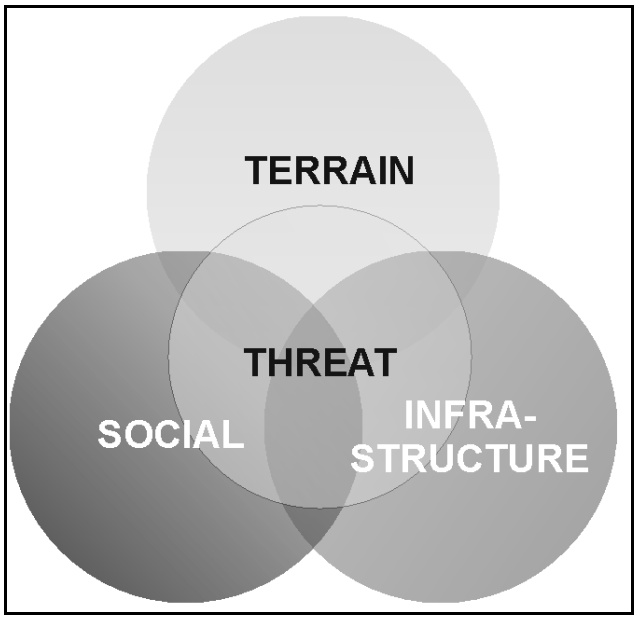


Figure 7-1. Urban Components

7-17. These components are not separate and distinct categories but rather are overlapped and interdependent. Thoroughly analyzing these elements contributes to commanders' situational understanding, allows them to develop COAs that apply appropriate resources against decisive points, and potentially lessens the number and cost of close combat engagements. In stability operations and support operations, this understanding allows commanders to engage decisive points critical to maintaining peace or restoring normalcy to the urban environment.

TERRAIN

7-18. Although complex and difficult to penetrate with many ISR assets, the terrain is the most recognizable aspect of an urban area. Truly understanding it, however, requires comprehending its multidimensional nature. The terrain consists of natural and manmade features, with manmade features dominating; an analysis must consider both. Buildings, streets, and other infrastructure have varied patterns, forms, and sizes. The infinite ways in which these factors can intertwine make it difficult to describe a "typical" urban area. However, these elements provide a framework for understanding the complex terrain within an urban area. Furthermore, manmade features have significant effects on military systems and soldiers, and thus tactics and operations.

7-19. Urban areas present an extraordinary blend of horizontal, vertical, interior, exterior, and subterranean forms superimposed on the natural relief, drainage, and vegetation. While an urban area may appear dwarfed on a map by the surrounding countryside. In fact, the size and extent of the urban battlespace is many times that of a similarly sized portion of natural terrain. The sheer volume and density created by urban geometry can make urban operations resource-intensive in time, manpower, and materiel.

7-20. Commanders in other environments normally address the depth, breadth, and height of their AO in terms of two areas: *airspace* and *surface*. In an urban environment, commanders must broaden their scope to include *supersurface* and *subsurface* areas. Although spatially separated, each area may be used as an avenue of approach or mobility corridor, line of communications (LOC), and EA.

PHYSICAL ENVIRONMENT

7-21. Reconnaissance troops must understand the physical organization and complexity of the urban terrain, both manmade and natural, and tactical reconnaissance capabilities. Structures of the urban area significantly degrade the information that imagery acquires because it cannot penetrate inside buildings or into subsurface facilities. It can provide significant detail regarding major portions of the infrastructure. The physical attributes of the urban area also diminish the effectiveness of electronic reconnaissance capabilities. The limitations on imagery and electronic reconnaissance place a premium on human-based visual reconnaissance. Urban terrain presents an extraordinary mix of horizontal, vertical, interior, exterior, and subterranean forms. The four physical dimensions that must be considered are airspace over the city, buildings, streets, and subterranean systems.

7-22. Supersurface and subsurface areas magnify the complexity of the urban physical environment. Commanders must not only consider activities that occur outside of buildings and subterranean areas (the *external* space), but also the activities that occur unseen in buildings and subterranean systems (the *internal* space). The internal space further challenges command, control, and intelligence collection activities and increases the combat power required to conduct urban operations. Commanders must develop methods to help themselves visualize the multiple dimensions of the urban environment.

AIRSPACE

7-23. Aircraft and aerial munitions use the airspace as rapid avenues of approach in urbanized areas. Forces can use aviation assets for observation and reconnaissance, aerial attack, or high-speed insertion and extraction of soldiers, supplies, and equipment. Some surface obstacles, such as rubble, do not affect aviation assets. However, buildings of varying height and the increased density of towers, signs, power lines, and other urban constructions create obstacles to flight and can limit low-altitude maneuverability. Additionally, excellent cover and concealment afforded threat gunners in an urban area increases aviation vulnerability to small arms and MANPADS, particularly when supporting ground forces.

SURFACE

7-24. Surface areas apply to exterior ground level areas, such as parking lots, airfields, highways, streets, sidewalks, fields, and parks. They often provide avenues of approach and the means for rapid advance. However, buildings and other structures often canalize forces moving along them. As such, obstacles on urban surface areas usually have more effect than those in open terrain since bypass often requires entering and transiting buildings or radical changes to selected routes. In cases where urban areas abut the ocean or sea, large lakes, and major rivers, surface areas also apply to the surface of these bodies of water and may be a significant consideration for the commander of a major operation.

SUPERSURFACE

7-25. These areas include the roofs and upper floors of buildings, stadiums, towers, or other vertical structures. They can provide cover and concealment; limit or enhance observation and fields of fire; and restrict, canalize, or block movement. However, forces can move within and between structures at upper levels creating additional, though normally secondary, avenues of approach. Supersurface areas may also provide excellent locations for snipers; lightweight, handheld antitank weapons; and MANPADS. They enable top-down attacks against the weakest points of armored vehicles and unsuspecting aircraft. This area (and the subsurface area) requires commanders to think, plan, and execute ground operations vertically as well as horizontally.

SUBSURFACE

7-26. These areas are *subterranean* or below surface level. They may serve as secondary and, in fewer instances, primary avenues of approach at lower tactical levels. When thoroughly reconnoitered and controlled, they may provide excellent covered and concealed LOCs for moving supplies and evacuating casualties. They may also provide sites for caching and stockpiling supplies. They include the subways, sewers, drainage systems, cellars, and utility systems of the urban area. Both attacker and defender can use subsurface areas to gain surprise and maneuver against the rear and flanks of an adversary and to conduct ambushes. However, these areas are often the most restrictive and easiest to block. Their effectiveness normally depends on superior knowledge of their existence and overall design.

STREET PATTERNS

7-27. Patterns within the urban area result from the arrangement of the streets, roads, highways, and other thoroughfares. These patterns influence all battlefield operating systems; however, they greatly affect maneuver, C2, and CSS. Urban areas can display any of three basic patterns and their combinations: *radial*, *grid*, and *irregular* (see Figure 7-2).

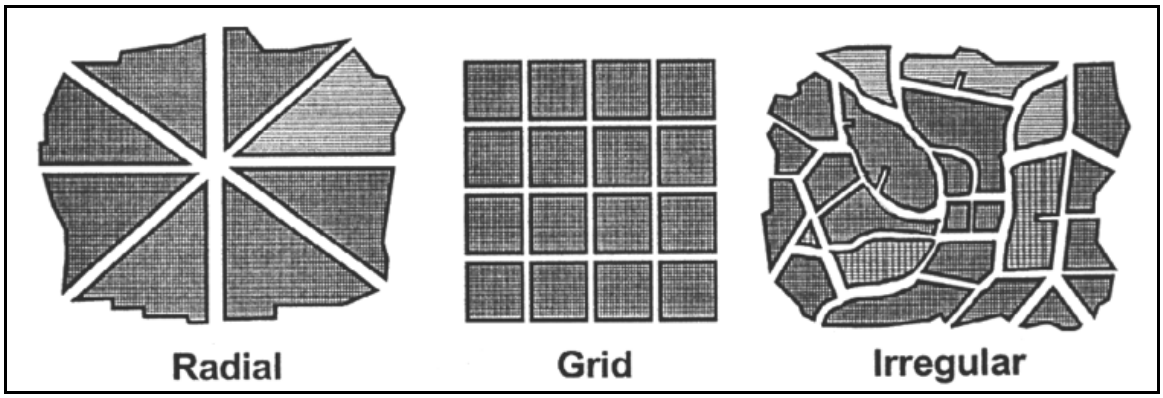


Figure 7-2. Basic Internal Street Patterns

7-28. Societies of highly concentrated religious or secular power often construct urban areas with a radial design: all primary thoroughfares radiating out from the center of power. Cities with this design may signal an important historical aspect of significant relevance in the overall analysis of the urban society. Terrain permitting, these streets may extend outward in a complete circle, or may form a semicircle or arc when a focal point abuts a natural barrier such as a coastline or mountain. To increase mobility and traffic flow, societies often add concentric loops or rings to larger radial patterns. Unless commanders carefully plan boundaries, routes, and axes of advance, their subordinate units' movement or maneuver may be inadvertently funneled toward the center of urban areas with this pattern resulting in congestion, loss of momentum, and an increased potential for fratricide.

7-29. The most adaptable and universal form for urban areas is the grid pattern: lines of streets at right angles to one another forming blocks similar to the pattern of a chessboard. A grid pattern can fill in and eventually take over an original radial pattern. Grid patterns often appear to ease the assignment of boundaries for subordinates units. However, commanders must also consider the influence of the natural terrain that underlies the manmade construction. They must also consider the influence of the buildings and other structures lining these streets, such as their height and construction, before assigning boundaries. Describing boundaries (and PLs) by easily recognizable features is as important in urban areas as elsewhere. If available, natural features are a better descriptor than manmade features that may be altered or unrecognizable. In some instances, particularly in stability operations and support operations where Army forces work closely with local law enforcement agencies, street patterns may have no effect on the assignment of boundaries. Instead, commanders may assign boundaries overlaid on existing administrative boundaries established by local law enforcement agencies.

7-30. In most urban areas, regardless of the original intent, plan, or vision, existing street patterns emerge from successive plans overlaid one on another, some well-planned to fit with previous plans and others a haphazard response to explosive urban growth. The result may mix patterns. Urban engineers and planners may specifically design irregular patterns for aesthetic reasons (as in many suburban housing

developments) or to conform to marked terrain relief. Irregular street patterns may alert commanders and analysts that the underlying natural terrain may exert greater influence over operations than in other portions of the urban area.

CORE

7-31. The core is the heart of the urban area—the downtown or central business district. Relatively small and compact, it contains a large percentage of the urban area's shops, offices, and public institutions. Often, it houses the headquarters for commercial and financial activities and usually contains important cultural, historical, and governmental buildings. As the focal point of the transportation network, residents find the core the easiest part of the urban area to reach. It has the densest concentration of multistory buildings and subterranean features (basements, underground parking garages, underground shopping centers).

INDUSTRIAL AREA

7-32. Industrial areas often develop on the outskirts of the urban areas where commercial transportation is easiest (along airfields and major sea, river, rail, and highway routes). The dispersed pattern of the buildings provides sufficient space for large cargoes, trucks, and materiel handling equipment. These areas may provide ideal sites for logistic bases and maintenance sites.

HIGH-RISE AREA

7-33. High-rise areas consist of multistoried apartments, commercial offices, and businesses separated by large open areas such as parking lots, parks, and individual one-story buildings. The automobile, mass transit systems, and improved road networks encourage these areas to grow and function further from the urban core. High-rise buildings are framed, light-clad construction with thin walls of brick, lightweight concrete, or glass.

RESIDENTIAL AREA

7-34. Residential areas can be found dispersed throughout the urban area; however, large suburban areas (or sprawl) normally form on the outskirts. Residential areas often consist of row houses or single-family dwellings set in a grid or ringed pattern within a planned development project. Yards, gardens, trees, and fences usually separate the buildings in a residential area. Openings between buildings range from 5 to 75 meters. The buildings are normally of a light-clad, framed wood construction or brick. The combined population of surrounding suburban areas often far outnumbers that of the urban area proper. Specific suburbs tend toward homogeneity based on ethnicity, religion, economics, or some other social aspect.

COMMERCIAL RIBBON AREA

7-35. Commercial ribbon areas are rows of stores, shops, and restaurants built along both sides of major streets that run through and between urban areas. These same types of areas often develop along the roads that connect one urban area to another (strip areas). The buildings uniformly stand two to three stories tall (about one story taller than the dwellings on the streets behind them.

SOCIETY

7-36. During urban operations, the troop will be required to interact with or in close proximity to large numbers of civilians. As the urban area increases, the troop must be aware of the characteristics of a diverse population whose beliefs may vary based on numerous factors. The troop collects information the squadron uses to determine what civilian considerations the brigade will encounter through multidimensional reconnaissance. Information requirements for the troop consists of the following:

- Demographics.
- Political affiliations and grievances.
- Ethnicity.
- Factions.
- Cultural distinctions.
- Living conditions.
- Religious beliefs.
- Attitude toward US forces (friendly, neutral, hostile).

7-37. Analyzing the information gained on the civilian populace will be an important factor in determining COAs for the brigade. The commander analyzes the information collected and assesses what actions are necessary to control the impact of civilians. Various options that the commander can recommend to higher are screening civilians, prohibition of unauthorized movement, diverting or controlling refugee movements, and evacuation.

7-38. It is extremely important that all the members of the troop understand the characteristics of the society. The side that gains the support of the population retains innumerable advantages. To gain or retain the support of the population, commanders must understand its social and political characteristics.

INFRASTRUCTURE

7-39. Urban structures are those physical and cyber-based systems that support the inhabitants and their economy and government. Targeting or controlling vital parts of the infrastructure can deter or isolate threat aggression. Targeting any portion of the urban infrastructure can have a cascading effect (either intentional or unintentional) on the other elements of the infrastructure. The commander can gain a tactical advantage using precision munitions, electronic disruption of communications, or intelligence on essential facilities or structures. Commanders must look beyond the immediate tactical situation and understand the effects that the destruction of any of these elements may have on future operations and the inhabitants of the urban area. The troop identifies infrastructure in the urban area that may provide commanders with essential logistics and CSS assets and also recommend what the initial expenditure of time and resources may be necessary to support operations within the urban area.

THREAT

7-40. The troop must be trained and ready to address urban threats ranging from regional conventional military forces, paramilitary forces, guerrillas and insurgents to terrorists, criminal groups, and angry

crowds. Increasingly, the Army will face threats that severely differ in doctrine, organization, and equipment. In stability operations and support operations, commanders will have to broaden the threat to include natural disasters, hunger and starvation, and rampant disease. These threats may be found in isolation, but most likely commanders will encounter them in various combinations. An emphasis on asymmetric means to offset US military capability has emerged as a significant trend among potential threats and become an integral part of the threat principles and tactics discussed below. Asymmetry results when one opponent has dissimilar capabilities—values, organization, training, or equipment—that the other cannot counter. It is not a new concept; it is the natural outgrowth of a sound METT-TC analysis by an intelligent, freethinking, and adaptive threat.

7-41. Trends indicate an increasing availability and integration of more sophisticated technology and unorthodox operational approaches by potential opponents. Offsetting their inherent weaknesses, threat forces will seek advantage in urban and complex terrain to remain dispersed and decentralized, adapting their tactics to provide them the best success in countering a US response. They seek to counter the technological and numerical advantages of US joint systems and forces, and to exploit constraints placed on US forces due to cultural bias, media presence, ROE, and distance from the crisis location. Urban environments also provide many passive dangers, such as disease from unsanitary conditions and psychological illnesses.

7-42. While the active threats will vary widely, many techniques will be common to all. During his analysis, the troop commander must consider techniques threat forces have used in the past.

SECTION III - PLANNING FOR URBAN RECONNAISSANCE

7-43. Reconnaissance troops conduct reconnaissance in urban environments to gain critical information for the BCT. Reconnaissance troops must have clear and detailed reconnaissance guidance from the commander to begin planning for reconnaissance in support of the BCT during the operation.

7-44. To be successful the reconnaissance effort must be exceptionally comprehensive and synchronized. Success requires integrating all reconnaissance sources into tactical planning. This requires that reconnaissance assets deploy and execute early with clear reconnaissance guidance (focus, tempo, engagement criteria) and an integrated plan that supports insertion or infiltration, fires to support maneuver, communication, extraction, resupply, and cueing and mixing ISR assets. This is embodied in the ISR plan. The plan must be flexible and conform to the changing information requirements of the commander. The plan must also support all phases of urban operations (see Figure 7-3).

Phases of Urban Operations
Reconnoiter the Objective
Move to the Objective
Isolate the Objective
Secure a Foothold
Clear a Built-Up Area
Consolidate
Reorganize

Figure 7-3. Phases of Urban Operations

PLANNING FUNDAMENTALS

7-45. Reconnaissance units require significantly more time to execute missions and maintain an acceptable survivability rate. Reconnaissance often will be a slow and methodical effort. Such forces must have the time to reconnoiter carefully the interior of structures for snipers and other small threat teams. They must also have time to breech small obstacles and mass combat power necessary to fight through security forces to continue their reconnaissance.

7-46. The troop commander must ensure the troop has all the known information and intelligence of the operational environment. He must coordinate for support from other ISR assets available to the squadron and/or BCT both prior to and during reconnaissance. Information from SIGINT and IMINT can assist the commander to develop and complete his scheme of maneuver during troop-leading procedures. IMINT facilitates a detailed map reconnaissance in determining how terrain supports movement. The commander views the terrain by not only how it supports his mission success but also from the threat's perspective. MASINT assets should be focused on restricted terrain or high-speed avenues of approach to provide early warning of potential threat movements. UAVs can support infiltration and reconnaissance to provide early warning and reconnaissance of areas that are restricted to the ground troop.

7-47. Figure 7-4 illustrates the planning checklist for urban operations.

PLANNING CHECKLIST
✓ Develop human intelligence collection plan.
✓ Determine R&S objectives.
✓ Plan infiltration and exfiltration routes.
✓ Synchronize aerial and ground reconnaissance plans.
✓ Coordinate for fire support.
✓ Develop communications and sustainment plan.
✓ Continue improving urban operations sketch.

Figure 7-4. Urban Reconnaissance Planning Checklist

PLANNING CONSIDERATIONS

7-48. The commander considers the following as he develops his urban operations plan during troop-leading procedures:

- The threat situation, to include:
  - Type and capabilities of likely threat weapons systems, night observation systems, and communications systems.
  - Special equipment, such as body armor, may be addressed.
  - Higher headquarters threat COAs, to include a SITEMP depicting composition, known and template dispositions, and potential engagement areas.
- Civilian considerations, to include:
  - Locations of government offices, political party headquarters, and NGOs.
  - Compositions and dispositions of regional/local military, paramilitary, and law enforcement organizations.
  - Factions, key leaders, locations, compositions, and dispositions of known friendly, neutral, and belligerents, to include:
    - Recent trends in public opinion.
    - Intensity levels of current and past disturbances.
    - If required, effects from use of lethal force against civilians.
  - If applicable, description and capabilities of uniforms, insignia, vehicles, markings, and equipment, to include weapons and NODs.
  - Locations of police stations, armories or barracks, encampments, weapons holding areas, and staging areas.
  - Locations of power generation/transformer facilities, water treatment plants, and food distribution points.
  - Locations of communications networks and media outlets.
- If applicable, initial map and aerial photograph reconnaissance is conducted to pinpoint key terrain and other important locations in the AO, and an urban operations sketch that portrays key terrain, to include (see Figures 7-5, 7-6, and 7-7):
- Safe havens.
- Hospitals.
- Police stations and armories or equivalent.
- Embassies.
- Power generation, communication, and water treatment facilities.
- Restricted or protected areas designated by the ROE.
- Hazardous areas, to include:
  - Above- or below-ground natural gas or other fuel storage.
  - Construction sites.
    - Intersections and bridges.
    - Known hostile, belligerent, or criminal areas.

    - Major terrain features such as:
        - Buildings that may mask or interfere with communications or the GPS.
        - Parks.
        - Industrial complexes.
        - Airports.
    - Avenues of approach, to include:
        - Main thoroughfares and/or improved road surfaces.
        - Escape and evasion routes or corridors.
        - Subterranean routes and access.
- Terrain and weather considerations, to include:
    - Effects on effective ranges of weapons systems, laser designators, and NODs.
    - Effects on UAVs and other aviation assets for reconnaissance, transport, resupply, casualty evacuation (CASEVAC), or fire support.
    - Effects on - mobility.
    - Effects on civil demonstrations or services.
- Friendly force considerations, to include:
    - Mission of adjacent and follow-on forces.
    - Missions of ISR and other elements operating within the troop AO but not under troop control.
    - Higher headquarters and follow-on force reconnaissance objectives.
    - Higher headquarters and follow-on force commander's CCIR.
    - Higher commander's reconnaissance focus, tempo, and engagement criteria, to include adjusting tempo and engagement criteria during reconnaissance.

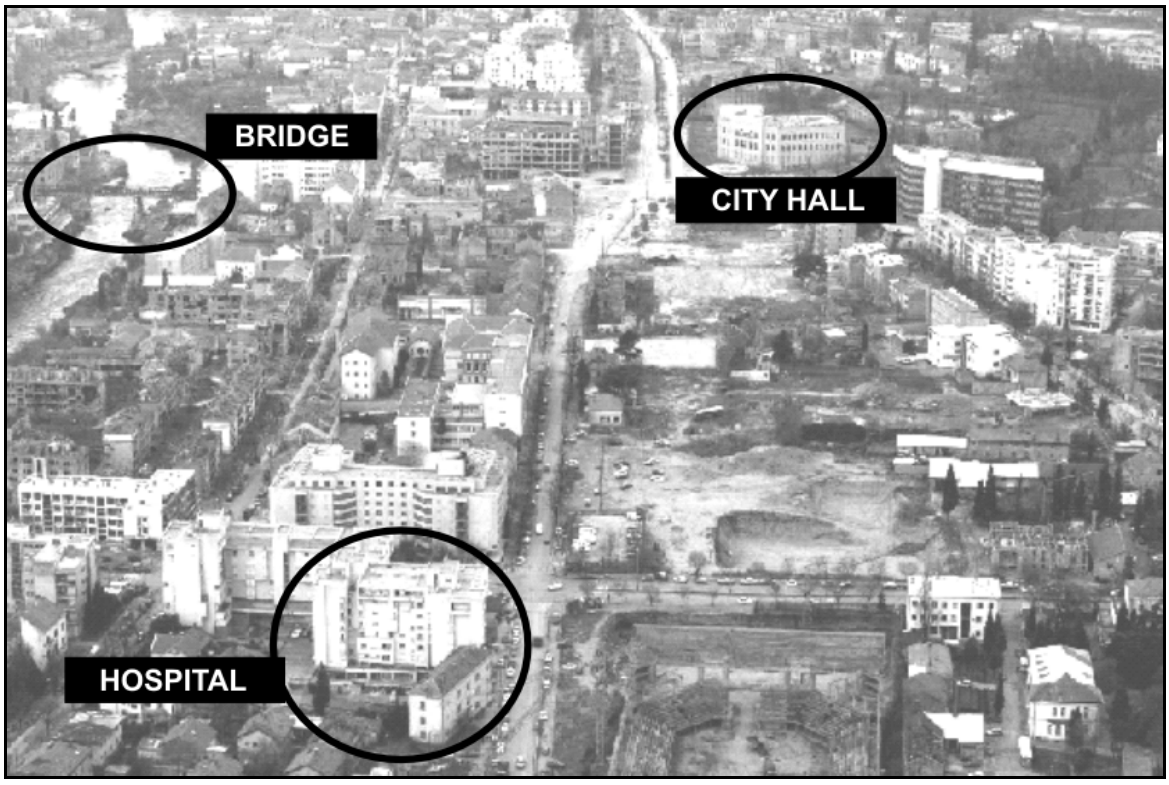


Figure 7-5. Initial Photo Reconnaissance in Urban Operations

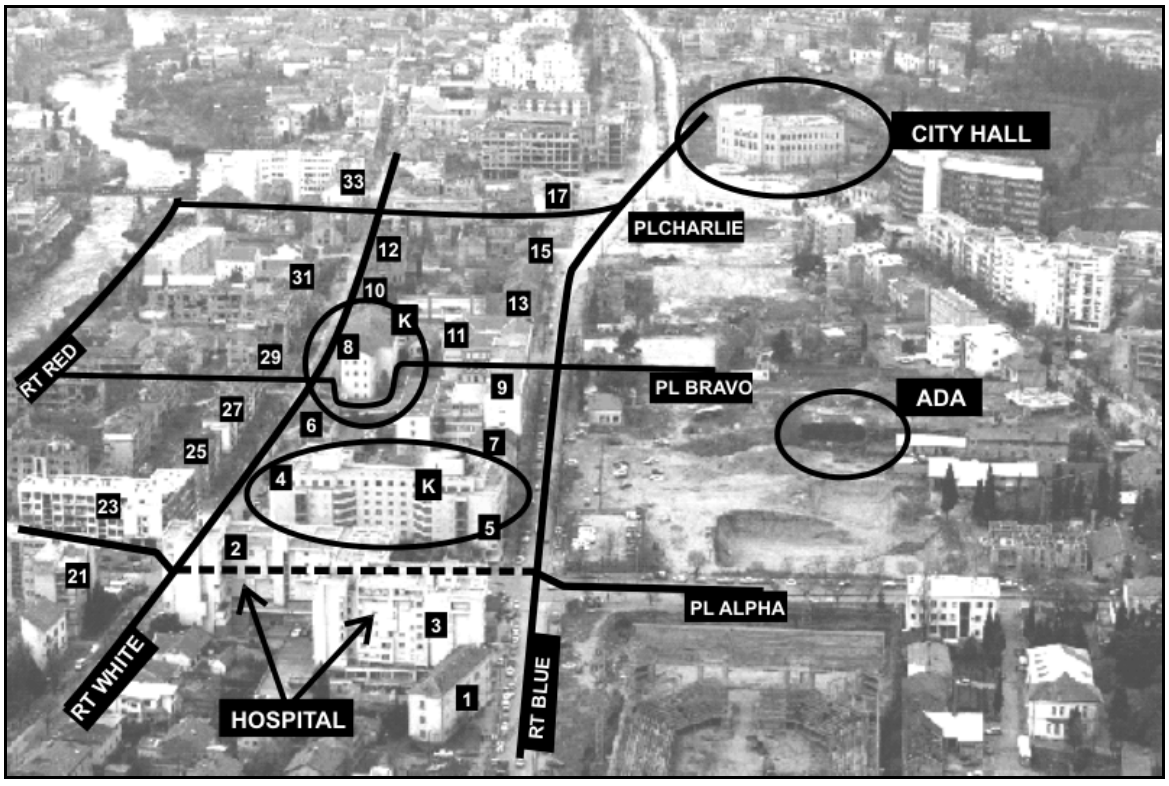


Figure 7-6. Refinement of Urban Operations Photo Reconnaissance

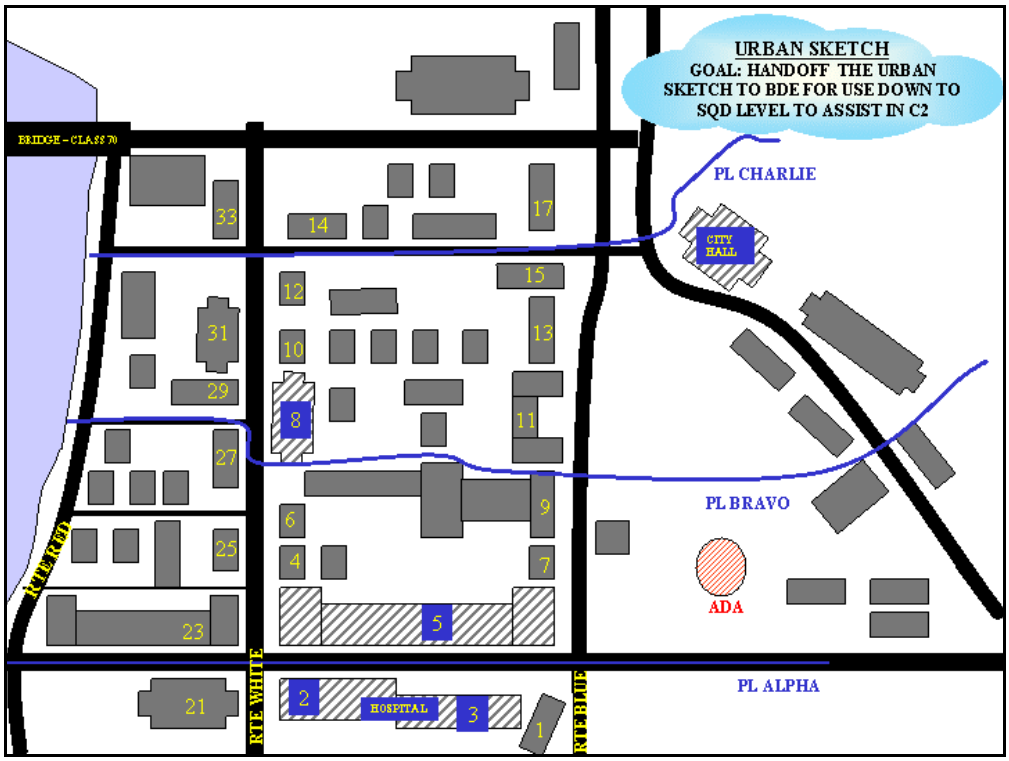


Figure 7-7. Urban Operations Sketch

7-49. The commander develops his intent that addresses the following:

- Key reconnaissance tasks that must be accomplished during urban operations.
- Purpose for reconnaissance in relation to the higher headquarters reconnaissance objective.
- End state for reconnaissance.

7-50. The commander develops a concept of operation that describes, as a minimum:

- Focus and tempo for reconnaissance, to include changes to tempo based on anticipated contact or other requirements.
  - Reconnaissance and HUMINT collection start outside the urban area to gain information about the objective prior to entering the urban area.
  - If the troop commander is tasked to conduct reconnaissance operations, he must decide on stealthy or aggressive methods.
  - If METT-TC forces the troop commander to conduct only surveillance operations, the troop's focus must be clearly defined.
- HUMINT collection plan that focuses on the location of reliable sources of information near the urban area to gain the most current situation in the AO.

- If applicable, movement to the areas to be reconnoitered, to include techniques and formations.
  - Select movement techniques that support the tempo and avoid known threat forces outside the areas to be reconnoitered.
  - Select the route(s) and establish a march order on each route.
  - Identify infiltration route(s) against a higher threat and establish an order of march.
  - Identify dismount point and suitable concealed locations to position vehicles prior to conducting the reconnaissance.
  - Identify vehicle positions that allow utilization of onboard optics, such as the LRAS3, to assist in observation and provide overwatch.
  - Identify surveillance positions within the urban area.
- Reconnaissance of the designated areas to answer the information requirements.
  - Platoon and other subordinate element tasks, to include reconnaissance, security, and follow and support, as required.
  - Integration of mounted and dismounted reconnaissance and surveillance.
  - Requirements for short and long duration surveillance of NAIs.
  - Urban assessment and information requirements (see Appendix D).
- Synchronization of aerial and ground reconnaissance assets.
- Synchronization of target acquisition assignments with reconnaissance tasks.
  - Target description, location (known or templated), and method of engagement.
  - Desired target effect and purpose for effect.
  - Criteria to change from target surveillance to designation (illumination).
- Integration of other elements or assets into the reconnaissance effort.
  - UAVs reconnoiter routes, infiltration lanes, or key and restrictive terrain within the AO.
  - PROPHET monitors for specified communications traffic or transmissions within the designated areas, or within other areas containing threat reserves or supporting forces.
  - GSR orients on NAIs in advance of the platoons or on avenues of approach or routes on the flanks of the platoons' reconnaissance.
  - Ground sensors, such as IREMBASS, are emplaced on flank approaches or routes into the designated area or leading to NAIs within the area.

  - Engineers assist with classification of bridges, overpasses, culverts, fords, routes, and obstacles within the designated area.
  - Redundant tasking to cover the same NAI or target.
- Locations and criteria for reconnaissance and target handover.
  - Accepting handover from or transferring to another element.
  - Conducting handover within the troop by subordinate elements.

7-51. The commander prioritizes fires and use of fires to maintain maximum range forward of the reconnaissance platoons. Troop leaders must consider numerous factors when coordinating and planning targets that will support operations in an urban environment. The most likely mission that troops must coordinate is for targets that will support disengagement from unexpected contact. The following are fire support considerations for urban operations (they are by no means all-inclusive):

- Determine who controls each fire support asset.
- Exchange fire plan and observer plan with adjacent units.
- Develop observer plan, to include OPs in buildings, location of laser designators, and overwatch of trigger points.
- Identify location of hazardous sites—above and below ground fuel and industrial storage tanks, gas distribution lines—any other area where incendiary effects of detonating artillery and mortar rounds will start fires.
- Identify the general construction or composition of the buildings and road surfaces (may impact the type of munitions used).
- Determine where building masking, overhead power lines, or towers degrade GPS and compass functioning.
- Determine if use of obscurants and illumination favor friendly units or the threat.
- Determine if buildings or structures require fire support personnel to carry/use equipment not normally carried (e.g., field expedient antennas, climbing rope, wire gloves, axes or sledgehammers).
- Determine the requirements for radar coverage? Do radar zones need to be established? If so, where? For how long?

7-52. The troop commander must also plan how to employ mortars to provide maximum coverage for teams that may be dispersed at greater distances than the range of the guns. In addition to the use of conventional munitions, precision-guided munitions (PGM) must also be carefully considered. The biggest consideration for using PGMs is that some sort of laser or infrared designator equipment must be available. If these assets are not available, personnel augmentation may be required.

7-53. The reconnaissance troop may receive support from a variety of attack helicopters ranging from fully modernized AH-64s to lightly armed but agile OH-58Ds. Regardless of the specific type of attack helicopter available, the inherent flexibility of Army aviation units allows them to

accomplish the same missions and tasks in a variety of situations. Because of the increased risk of small arms and MANPAD engagements, aviation forces normally support urban operations by operating away from built-up areas; their key role usually is isolation of the objective. If risk analysis determines that the payoff is higher than the risk, however, aviation forces can be employed in and around the urban area.

- Bypass and engagement criteria both during movement to and reconnaissance of designated areas.
- Commitment criteria and actions of the higher headquarters reaction force or reserve in support of the troop's infiltration, movement, and reconnaissance.
- Graphic control measures that support the concept of the operation, to include:
  - Boundaries identifying the troop's AO and a line of departure.
  - For routes or lanes, designate start points, release points, and rally points for each route,
  - Phase lines, checkpoints, and contact points for coordination with other elements.
  - Areas to be reconnoitered.
  - TIRS or GIRS to assist command and control.
- CSS considerations, to include—
  - Priorities for service support.
  - Security requirements and techniques for combat trains or supporting service support elements.
  - Movement and positioning of trains and logistical supply points.
  - Resupply, to include emergency and caches.
  - Caches for Class I, III, IV, VIII, and other mission-specific items such as batteries.
    - Drop points away from vehicle hide and observation posts.
  - Casualty consolidation and evacuation. Organic medical support in the troop is generally limited to self and buddy aid. The nearest medical facility that can provide definitive care and treatment must be identified due to the remote placement of teams and primary care is not readily available. CASEVAC/medical evacuation (MEDEVAC) operations are considered and planned for. Reconnaissance soldiers should be combat-lifesaver qualified and have emergency medical technician training.
  - Vehicle recovery, to include secured collection points and maintenance procedures.
  - Equipment and supply destruction criteria.
- Communications considerations, to include—
  - Positioning of commander, XO or CP, and retrans to maintain communications with the higher headquarters and other designated elements.

- Method and techniques for communication between mounted and dismounted elements.
- If necessary, responsibilities and procedures for integrating supporting analog units into the troop digital network.

- Continue updating urban operations sketch.

SECTION IV - EXECUTION OF URBAN OPERATIONS

7-54. Figure 7-8 outlines the steps for executing urban operations. Each step is explained in the paragraphs that follow.

- ✓ **Approach/enter the urban area of operations**
- ✓ **Employ surveillance teams (mounted/dismounted)**
- ✓ **Conduct reconnaissance**
- ✓ **Assess the area of operations**
- ✓ **Combat service support considerations**
- ✓ **End state**

Figure 7-8. Urban Operations Execution

APPROACH/ENTER THE URBAN AREA OF OPERATIONS

7-55. The recce troop conducts reconnaissance and HUMINT collection outside of the urban area to gain information on the objective. Depending on the time available, the troop develops the urban situation progressively from the surrounding area toward the city. The commander refines objectives and routes as he gains and analyzes information (see Figure 7-9). Using data obtained from cues from one or more sensors, such as PROPHET or GSR, UAVs or aerial reconnaissance assets are employed to conduct aerial reconnaissance of routes and objective areas. UAVs are focused on unit entry points to determine the threat situation, such as obstacles in the urban area, ambush positions on rooftops, or movement of personnel and vehicles as units approach. As discussed earlier, the aerial and ground reconnaissance plans must be synchronized to be effective (see Figure 7-10).

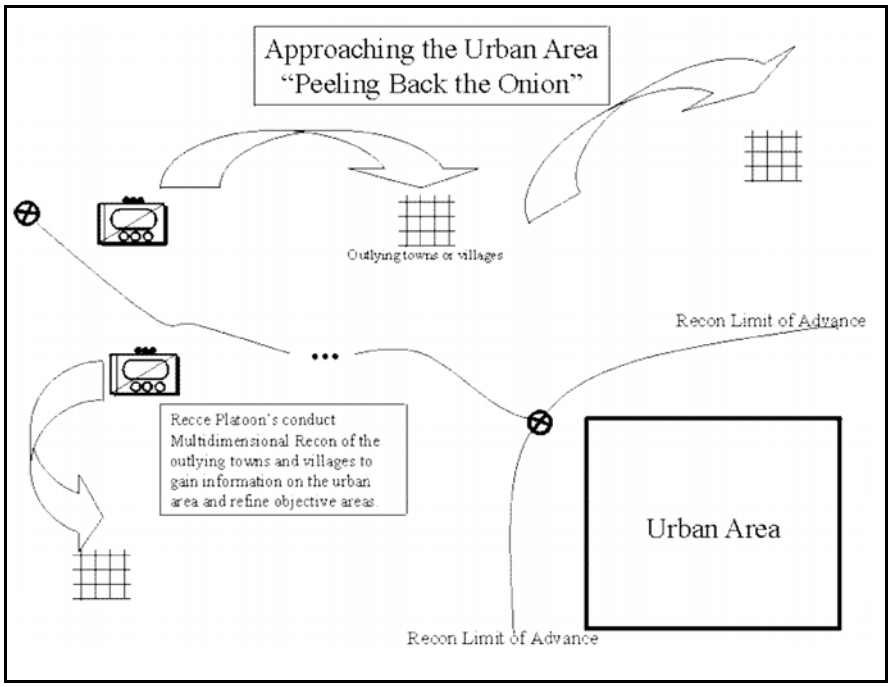

Approaching the Urban Area
"Peeling Back the Onion"
Outlying towns or villages
Recon Limit of Advance
Recce Platoon's conduct Multidimensional Recon of the outlying towns and villages to gain information on the urban area and refine objective areas.
Urban Area
Recon Limit of Advance

Figure 7-9. Approach of the Urban Area

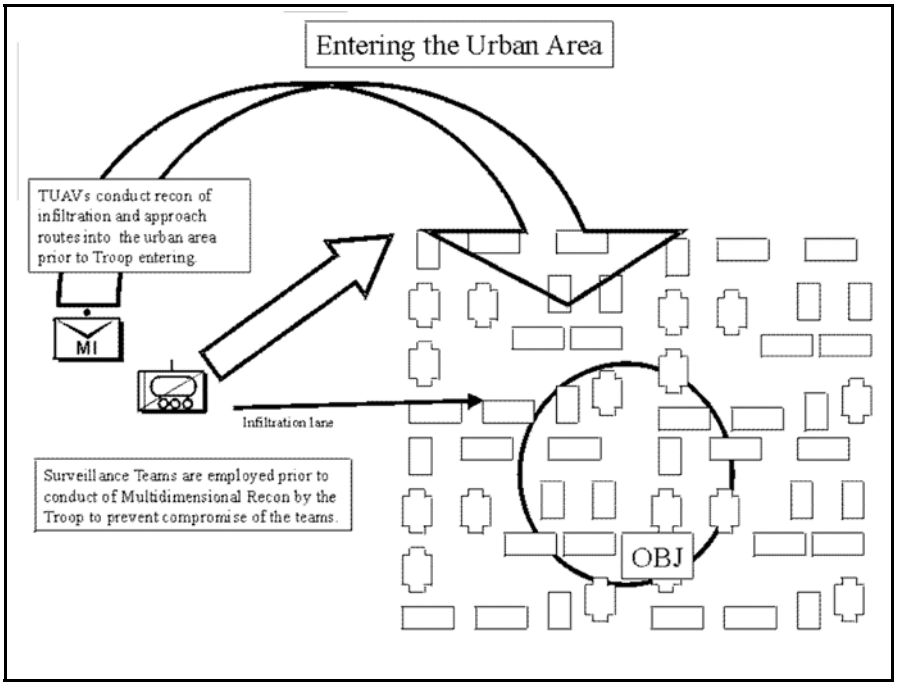

Entering the Urban Area
TUAVs conduct recon of infiltration and approach routes into the urban area prior to Troop entering.
MI
Infiltration lane
Surveillance Teams are employed prior to conduct of Multidimensional Recon by the Troop to prevent compromise of the teams.
OBJ

Figure 7-10. Entering the Urban Area

7-56. The troop commander manages resources during ISR operations to avoid undertasking collection systems. At times the troop's collection capability may exceed current taskings. Units constantly reevaluate each collection asset for unused capability, and assign or redirect unused assets/capacity towards the most important unfulfilled requirements.

7-57. The troop may be redundant in assigning several identical assets to cover the same NAI or target. Redundant tasking enables mission accomplishment when the probability for success by one asset is low.

7-58. The reconnaissance troop orients on the objective by occupying and/or observing key terrain and threat avenues of approach. The scout platoons can use their sights, including thermals, to conduct long-range surveillance and to locate threat positions and/or vehicles prior to forces entering the urban area. In addition to surveillance, the troop may conduct security tasks, which includes the following:

- Calling for and adjusting indirect fires.
- Identifying and preventing threat forces from escaping (within unit's capability).
- Identifying and providing early warning of threat reinforcement of the built-up area.
- Identifying and providing early warning of threat counterattack.

EMPLOY SURVEILLANCE TEAMS (MOUNTED/DISMOUNTED)

7-59. The primary method of employing surveillance teams is in a hide or surveillance site. However, the terrain, mission, and location of the site may dictate that the teams establish separate surveillance site(s) to effectively observe the area. A minimum of two soldiers is required to conduct surveillance. One observes while the other records the information in the surveillance log. Because observer efficiency decreases rapidly after 30 minutes, the observer and the recorder switch duties about every 30 minutes. When using night vision devices, the observer's initial period of viewing is 10 minutes followed by a 15-minute rest period. After several periods of viewing, the period is extended to 15 to 20 minutes. Hide site personnel should be rotated every 24 hours.

7-60. During limited visibility, two to three (normally three) members may be required to set up a new surveillance site. The site is near the target area so that information may be collected through close-in observation and sound detection. The remainder of the team stays in the hide site. The surveillance site and the route to and from it are selected during good visibility. Members go in and out of the surveillance site during limited visibility. One member observes, one records, and one maintains security to the rear and flanks. Only passive night vision devices are used to help prevent detection.

7-61. The hide site may not be suitable for transmitting reports. When this is the case, a separate communication site is needed. A minimum of two personnel is required at the communication site: one to send the message and erect an antenna, if necessary, and one to provide security. The communication site is occupied long enough to transmit the message and conceal any signs of the team's presence.

7-62. Hasty sites are used when the team plans to occupy for a short period (generally less than six hours). This most often occurs during target acquisition missions. The team makes the best use of natural cover and concealment. It uses manmade camouflage materials to improve concealment, as required, keeping movement to a minimum.

7-63. Generally, two or three members are positioned forward to observe the target area and record information. The hasty hide site is positioned far enough to the rear so it is out of the direct line of threat observation. The distance normally depends on terrain and vegetation. It must be far enough away from the surveillance element so that if a threat force discovers one of the two elements, the other element has enough standoff to prevent its members from being discovered also. The position will allow them to fire on the threat, and enable one or both elements to break contact. The team members in the hasty hide site maintain rear and flank security. Communication is normally conducted after the team moves away from the area.

INFILTRATION

7-64. Depending on the mission and the information gained initially, the troop may have to conduct infiltration using surveillance teams to observe areas of interest or conduct target acquisition. Plans for infiltration are based on the requirement for conducting movement to the AO with the least risk of detection. Infiltration considerations are—

- Concealed primary or alternate routes are selected based on detailed map reconnaissance and aerial photographs, ground reconnaissance, and threat information from other sources.
- Infiltrating elements must avoid obstacles, silhouetting locations, threat positions, main avenues of approach, and movement on heavily populated routes and trails.
- Infiltration should be during periods of reduced visibility and reduced threat alertness. The time is especially important during critical phases such as moving through populated areas.
- Scouts must know routes, rally points (primary and alternate), time schedules, danger areas, and the threat situation. These are critical to an optimum balance of speed and stealth.
- The team should be provided with centralized coordination to ensure that all scouts are acting in accordance with cover and deception plans. Infiltration by land is characterized by centralized planning and decentralized execution.

EXFILTRATION

7-65. The principles of route selection, movement formations, and movement security are observed during movement to the extraction site. Exfiltration considerations are—

- The amount of time that a team remains in the urban AO depends on its mission, composition, and equipment. The exfiltration is critical from a standpoint of morale and mission accomplishment. Plans for extraction are made before the operation, along with alternate plans for contingencies such as the evacuation of sick or injured personnel. During the mission, the team leader may be faced with an unforeseen situation that may demand the utmost flexibility, discipline, and leadership.

- Each team is given code words in the OPORD for use during exfiltration. For example, one code word may mean that the team is at its PZ. Another may mean that both the primary and alternate PZs are compromised and to abort the extraction.
- When a team has missed a certain number of required transmissions, the command assumes that the team has a communications problem, is in trouble, or both. At that time, a no-communication resupply and exfiltration plan is used.
- Exfiltration of the team may be by means other than linkup with the team's vehicles. The OPORD may specify dismounted exfiltration or linkup with friendly forces in an offensive operation. Any of these means may also be planned as alternatives in the event the team cannot be extracted by its vehicles or must take action to avoid capture.
- Teams must be trained in exfiltration techniques so they can walk out singly or in groups.

NOTE: Infiltration and exfiltration are discussed in greater detail in Chapter 3 of this manual.

URBAN SURVEILLANCE SITE

7-66. Surveillance teams can construct fixed urban hide sites in occupied and abandoned buildings, water tanks, shrubbery, on warehouse rooftops, or in attics of multistory buildings or other tall structures. If possible, teams should avoid wooden buildings and buildings in a significantly deteriorated condition because of the risk of injury from fire and structural failure. Fixed sites should not be in buildings that attract the threat's attention, but should be in rubble, yards, and gardens. If the site is set up in an undamaged part of the urban area, teams should select buildings of solid construction with serviceable stairs and basements that can be equipped for the rest and shelter of personnel during artillery bombardments.

7-67. Site construction may consist simply of taking a position by a suitable viewing port, or it can be much more elaborate, time being a crucial factor. Windows, doors and other openings (like bullet holes not used for observation) are filled with bricks, fragments of building materials, or sandbags if available. Flammable objects are removed from the premises. Supplies of water and sand are assembled for fighting fires. If the threat has previously occupied the building, the team takes precautions against booby traps and mines. When the threat is near, several places in the building are prepared for observation and departure.

HASTY SUBSURFACE SITE

7-68. A hasty subsurface site is constructed when there is not enough time to construct a complete subsurface site. The site is especially useful when there is little natural cover and concealment.

CONDUCT RECONNAISSANCE

7-69. Although the fundamentals of reconnaissance described in Chapter 3 are applicable in an urban environment, the type of information and the method by which it is collected takes on a new form.

Reconnaissance troops will develop an understanding of the regional, local, and neighborhood level situation. The reconnaissance troop soldiers and leaders generate a sense for their AO similar to the awareness of a "cop on the beat" or street detective. Reconnaissance soldiers must learn how the urban area operates and who are the sources of power or influence. Examples of these include—

- The formal and informal political power structure.
- Police/secret police/intelligence agencies.
- Criminal organizations.
- The military and paramilitary structures.
- Key terrain.
- Sensitivities of the populace.

7-70. Although each vehicle contains a HUMINT soldier, every soldier must possess the ability to gain information on the local area. This is the key to multidimensional reconnaissance. The most common technique for gaining this information is tactical questioning (see Chapter 6).

URBAN PATROLLING

7-71. Reconnaissance troops will not normally perform building-to-building clearing in urban areas. However, they may perform urban patrolling to accomplish reconnaissance missions. As discussed previously, detailed planning is accomplished prior to execution of a patrol. Using maps, aerial photography, and any known intelligence, leaders will determine the following:

- Preliminary route reconnaissance.
- Insertion and extraction routes.
- Choke points along the routes.
- Escape and evasion directions or corridors.

7-72. Urban patrols may be conducted mounted or dismounted with vehicles supporting. Patrols should never be conducted lower than section level.

NOTE: For detailed discussion on employment methods of dismounted and mounted reconnaissance in urban terrain, see FM 3-20.98 (FM 17-98).

Mounted Patrolling

7-73. Mounted patrols capitalize on the mobility of the unit's vehicles. Mounted urban patrolling principles include the following:

- Ensure mutual support and depth by maintaining constant observation among vehicles.
- Coordinate a supporting fire plan with any dismounted units in the area.
- Maintain all-around security.
- Develop a reliable communications plan for mounted and dismounted elements.
- Adjust patrol routes and speed to promote deception and avoid repetitive patterns.
- Maintain situational awareness.

7-74. Mounted patrols never enter an area via the route they will use to exit it (see Figure 7-11). Vehicles should travel at moderate speeds, with the lead vehicle stopping only to investigate those areas that pose a potential threat or support the essential tasks of the patrol. Use a vehicle speed of 15 to 20 miles per hour to allow for adequate observation and quick reaction. Slower speeds may allow noncombatants or a more aggressive group to impede movement. On the other hand, vehicles should move at high speeds only when responding to an incident. Equipment stored externally on the vehicle should be secured high enough to prevent locals from snatching equipment and weapons.

7-75. When vehicles must stop, designated crewmembers dismount to provide security. The vehicle gunner is at the ready, and the driver remains in his seat with the engine running. It is imperative that units maintain situational awareness during patrols; this includes orientation on other patrols in the urban area. If an element takes fire, it should be capable of communicating with other patrols to obtain assistance and support.

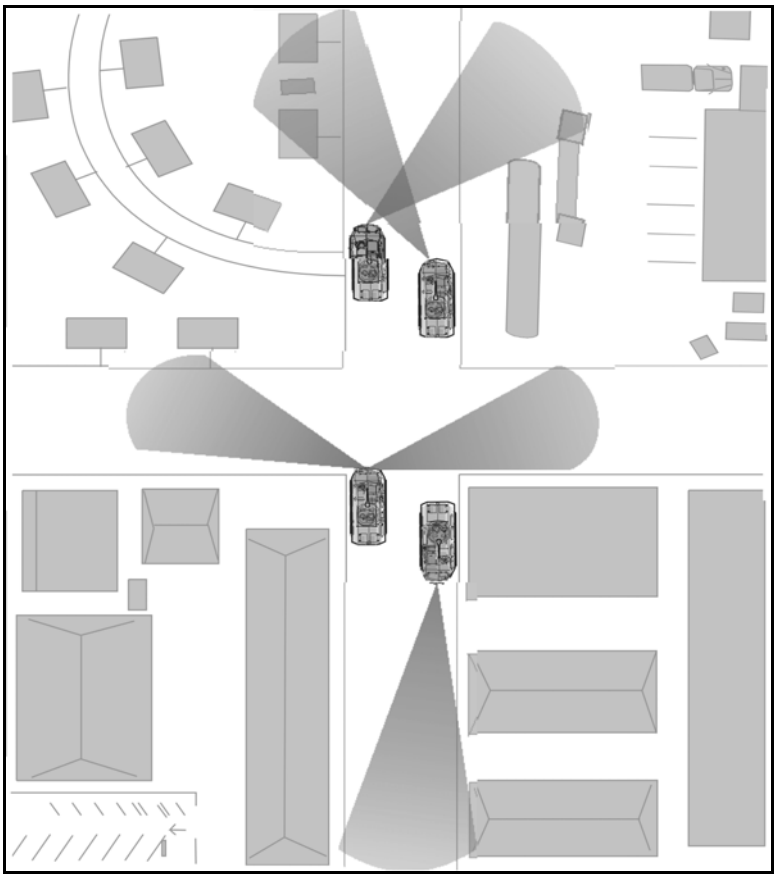


Figure 7-11. Mounted Urban Patrol

Dismounted Patrolling

7-76. During multidimensional reconnaissance, dismounted patrolling is used in HUMINT collection (see Figures 7-12 and 7-13). At a minimum, patrols are organized at squad level (three soldiers). Section-size patrols

(six soldiers) are the preferred organization for security purposes; a section-size patrol can maintain both an information-gathering team and a security team.

7-77. Leaders of dismounted patrols must maintain communications with vehicles and the patrol headquarters throughout the mission. In the reconnaissance platoon, vehicles must be prepared to react to any situation the dismounted element may encounter. Patrols should avoid areas with large masses of civilians, who could quickly turn against the presence of foreign soldiers. As with mounted patrols, dismounted patrol leaders must be ready to contact other patrols or supporting elements for support in unfavorable or dangerous situations.

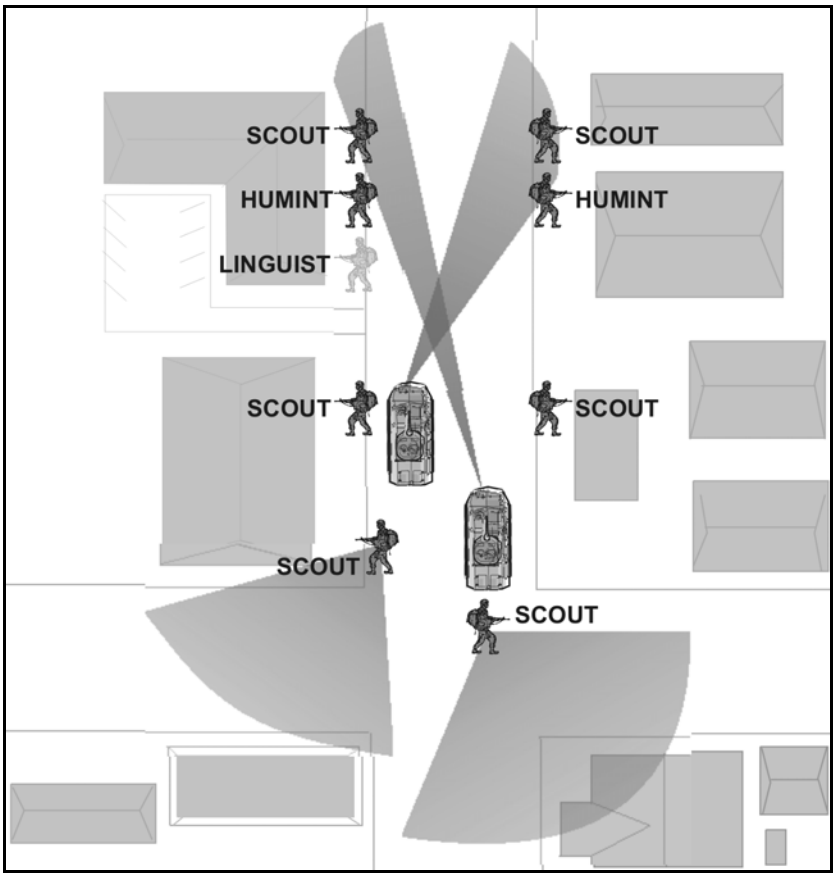


Figure 7-12. Dismounted Urban Patrol with Vehicle Supporting

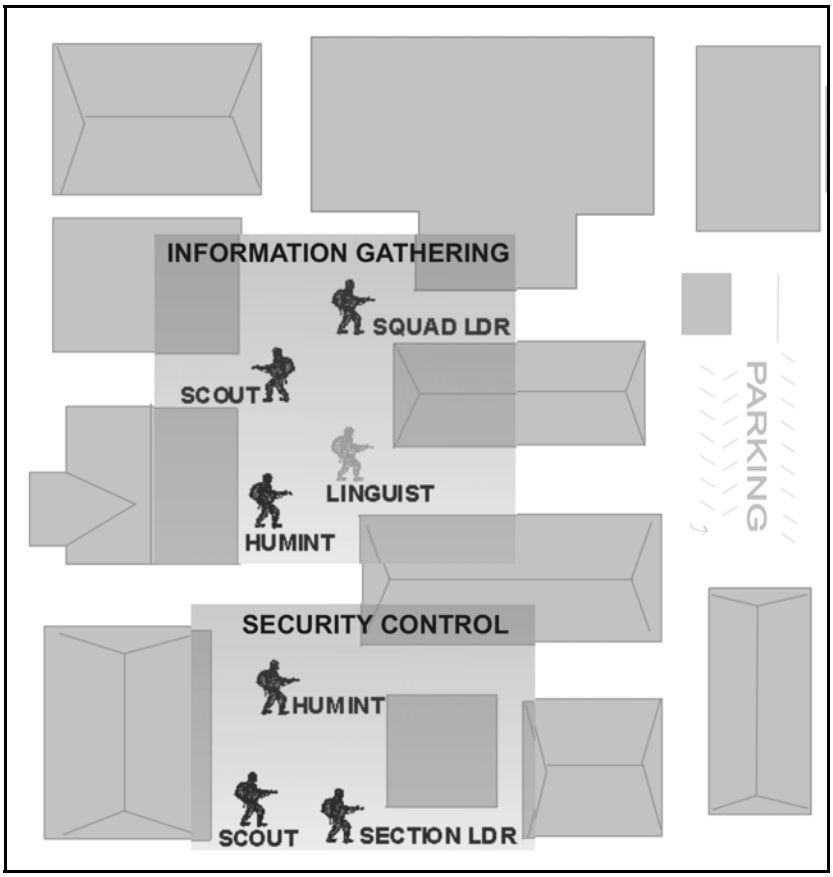


Figure 7-13. Dismounted Urban Patrol

Subterranean Patrolling

7-78. Reconnaissance of subterranean systems is accomplished to determine threat use of the passageway, capabilities, or in support of isolating the urban area. The team leader organizes his patrol with one soldier tasked with security to the front, point man, and one tasked with rear security. If available, an engineer should assist the team leader in classifying the passageway or reducing obstacles. The team leader navigates and records data through the passage. Two soldiers are left as a security post at the point of entry. They are responsible for detecting any threats that come upon the unit's rear and as a communications link between the team leader and higher.

7-79. The team leader should carry a map or sketch, compass, street plan, and information requirements. A team member should carry the tools needed to open manhole covers. The point man is equipped with night vision goggles and a feeler for trip wires. All soldiers entering the passageway should carry a sketch of the sewer system, to include magnetic north, azimuths, distances, and manholes. They should also have protective masks, flashlights, gloves, and chalk for marking features along the route. The team should be equipped with a 120-foot safety rope to which each man is tied. The safety rope assists the team in retrieving members who may slip or fall.

7-80. A constant concern to troops conducting a subterranean patrol is chemical defense. If used in tunnels, chemical agents are normally

encountered in dense concentrations with no chance of dissipating. The point man should carry a suitable NBC detection system (such as detector paper or a chemical agent monitor [CAM]) to be able to warn team members to don their masks.

7-81. In addition to chemical agents, noxious gases from decomposing sewage, especially methane gas, can pose a threat. These gases are not detected by NBC detection systems nor are they completely filtered out by the protective mask. Physical signs that indicate their presence in harmful quantities are nausea and dizziness. Team leaders should be constantly alert to these signs and know the shortest route to the surface for fresh air.

7-82. Once the team is organized and equipped, it moves to the entrance of the tunnel, which is usually a manhole. After the manhole is removed, the team waits 15 minutes to allow any gases to dissipate. The point man then descends into the tunnel to determine if the air is safe to breathe and if movement is restricted. The point man should remain in the tunnel for 10 minutes before the rest of the team follows. If he becomes ill or is exposed to danger, he can be pulled out by the safety rope.

7-83. When the patrol is moving through the tunnel, the point man moves about 10 meters in front of the team leader. Other team members maintain five-meter intervals. If the water in the tunnel is flowing fast or if the sewer contains slippery obstacles, the intervals should be increased to prevent all members from falling if one man slips.

7-84. The team leader should note the azimuth and pace count of each turn he takes in the tunnel. When the team encounters a manhole to the surface, the point man should open it and determine the location, which the team leader then records. Recognition signals with friendly troops must be coordinated to prevent fratricide as the point man opens the manhole.

7-85. Once the patrol has returned and submitted its report, the commander decides how to use the tunnel. Sealing off manhole covers and emplacing obstacles in the tunnel are options to the commander. The patrol report is converted into an overlay for the urban operations sketch and sent to higher.

ACTIONS ON CONTACT

7-86. Reconnaissance troops always resist becoming decisively engaged. However, rehearsed actions on contact are essential to the survivability of the unit and success of the mission. All soldiers must have a clear understanding of the ROE; however, ROE does not prevent a soldier from protecting himself or his unit members. Figure 7-14 illustrates an approach to a battle drill when encountering a sniper or antiarmor weapons.

- Upon contact, make positive confirmation of the position or direction from which the fire came.
- Move the vehicles quickly out of the line of direct fire while returning fire if the threat position can be identified.
- Use other vehicles to envelop or cut off a sniper/antiarmor gunner's avenue of escape.

- If vehicles are caught in an area where they become decisively engaged, the vehicles must suppress the threat while moving out of the potential kill zone as quickly as possible.

7-87. For obstacles and barricades, patrols will move rapidly to an alternate route and report obstacles/barricades to higher headquarters. Do not try to clear an obstacle or barricade. These are usually covered by threat fire, mined, or booby trapped.

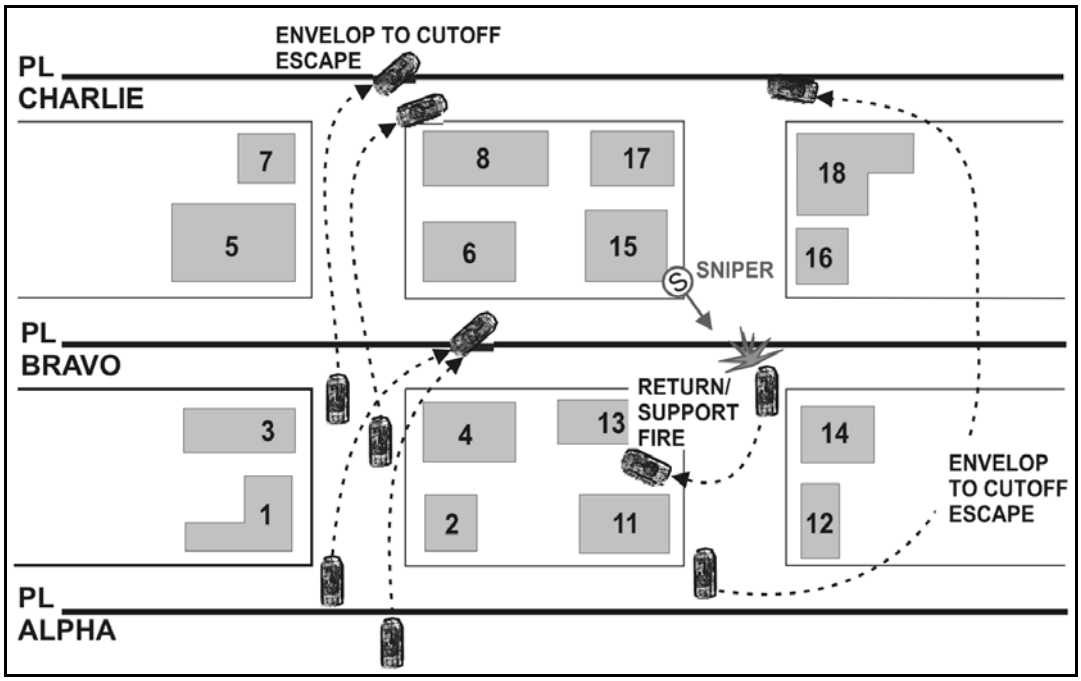


Figure 7-14. Actions on Contact

URBAN SWARM

7-88. Urban swarm is similar to the tactic used by police forces responding to an emergency that requires backup. The swarm concept considers numerous teams operating in a dispersed, noncontiguous fashion in the urban environment. As the units patrol their assigned area, they must be prepared to respond rapidly to a call for assistance by neighboring teams. Whether they can respond to a call for assistance will depend on their current situation and distance from those making the request.

7-89. A call for assistance should include an estimate of the support required. This request is transmitted to all other teams on the platoon and troop net. The commander directs the appropriate teams to respond and adjusts other teams to fill or cover gaps that are created. Alternative methods may include the teams closest to the requesting unit responding without direction, rather reporting their intention to respond. Situational awareness is critical in avoiding fratricide.

7-90. Command of the teams responding can be accomplished in several ways. The leader of the requesting unit who has the best situational awareness could assume tactical command of responding units. Another

option is to have the commander or XO command and control responding teams. Having too many leaders on the ground in one area is risky and must be avoided.

7-91. The key to this tactic is speed and flexibility. The requesting group has to be able to quickly and concisely inform the responding units of the situation and maneuver them to positions of advantage as they arrive. Again, the need for an urban operations sketch is of the utmost importance for command and control. The responding units also need to have the flexibility and training to enter an emerging situation effectively. Implicit in this concept is the capability of junior leaders to assume increased levels of responsibility and command.

7-92. Reconnaissance troops should be cautious of establishing easily targetable patterns. If units respond to crises in similar patterns, threat forces will quickly identify them and deliberately create crises in order to lure responding units into ambushes or exploit the temporary void created in the AO by responding units.

ASSESS THE AREA OF OPERATIONS

7-93. The troop commander receives and analyzes the information gathered by the platoons. The commander then assesses the AO according to the mission and intent of higher. The assessment will include, but is not limited to, the following:

- Threat composition and activity.
- Areas of vulnerability to friendly forces.
- Key terrain.
- Approach routes for mounted and dismounted forces.
- Entry points or points of penetration.
- Support positions for direct and indirect systems.
- Civilian disposition.
- Density and composition of urban area.
- Hazard areas (fuel storage, natural gas lines, chemical production sites).
- Communication facilities.
- Retrans sites.
- Intent of civilian populace (stay or flee).

COMBAT SERVICE SUPPORT CONSIDERATIONS

7-94. Additional medical support is requested as needed. When possible, MEDEVAC of team members is delayed until the whole team is evacuated from the AO. Wounded team members are sent directly to the nearest medical facility that can provide definitive care and treatment.

7-95. If necessary, the troop uses self-recovery to extract vehicles to an identified secured maintenance collection point outside the urban area.

END STATE

7-96. The end state of the reconnaissance troop's effort is allowing the commander to answer the two critical questions for the brigade: Is it essential to conduct operations in the urban environment, and if so, how can they employ combat power in the most efficient manner?

7-97. The troop conducts reconnaissance handover to provide the brigade with the following support:

- Production of urban operations sketches.
- Recommendation of entry points and routes.
- Surveillance of key objectives.
- Target acquisition.
- Assistance in isolating the AO by screening (or checkpoints) on the perimeter.
- Performing continuous HUMINT collection during the operation (recce troop focus).

7-98. The troop can continue to assist during the brigade operation by assisting in the isolation of the AO and collecting HUMINT on personnel attempting to leave or enter the area.

Chapter 8

Combat Service Support

CONTENTS

Fundamentals....8-2
Tactical CSS Functions....8-2
CSS Characteristics....8-4
Organization....8-5
FBCB2 Role in CSS....8-5
Troop Trains....8-7
Cavalry Squadron (RSTA) CSS....8-10
Brigade Reconnaissance Troop CSS....8-13
Logistics....8-14
Supply Operations....8-14
Resupply Operations....8-16
Maintenance and Recovery Operations....8-22
Field Services....8-24
Personnel Service Support....8-25
Personnel and Administrative....8-25
Combat Health Support....8-26
Unit Ministry Team....8-28
Enemy Prisoners of War....8-29
Capture and Handling....8-29
Evacuation Techniques....8-29

The reconnaissance troop's ability to continue its mission for extended periods of time depends on the parent unit's ability to obtain, transport, and distribute fighting resources such as fuel, ammunition, replacement personnel, and rations. Likewise the troop must develop rapid, dependable ways to treat and evacuate wounded soldiers, and repair combat equipment to sustain troop morale, combat power, and the readiness to fight. The troop must deploy with a minimum of three days of supply to sustain initial operations.

For the BRT, planning and execution of resupply and casualty and vehicle evacuation must be addressed and integrated at the BCT staff level in order for it to be effective. The troop 1SG and XO must ensure the troop's CSS requirements are nested in the BCT's scheme of support. They must also ensure that the assets are in place to support BRT operations before, during, and after the BCT's decisive operation and also the troop's transition to the BCT's follow-on mission.

More so than the recce troop of the cavalry squadron (RSTA), the BRT must tie into different CSS assets from within the BCT such as the brigade support battalion (BSB), task force trains, and task force combat units. The troop 1SG and XO, in conjunction with the BCT staff, must identify the CSS needs of the troop early and throughout the operation and assign responsibility to units to support or address those needs; or coordinate with units outside the BCT to support specific requirements such as aerial resupply or medical evacuation.

SECTION I – FUNDAMENTALS

8-1. The CSS system will be challenged to sustain the troop in the fast-paced, nonlinear AO. The CSS structure throughout the brigade or squadron is extremely austere, allowing for quicker deployability and a reduction of the support footprint in the AO. Utilization of the latest technological advances in CSS, such as the combat service support control system (CSSCS) and FBCB2, increases the parent unit's support-related situational awareness, allowing for effective support of the troop. This austere CSS organization will be significantly challenged to support the troop's wide-ranging and, in some situations, decentralized missions.

8-2. Logistics is planned in advance and aggressively pushed forward to the troops without the delay imposed by reacting to requests. FBCB2 provides CSS functionality by having logistics SITREPs, personnel SITREPs, logistical call for support and logistics task order messaging, situational awareness, and task management capabilities. This functionality affects the synchronization of all logistics support on the battlefield between the supported and the supporter.

TACTICAL COMBAT SERVICE SUPPORT FUNCTIONS

8-3. Tactical CSS involves six essential functions: manning, arming, fueling, fixing, moving, and sustaining soldiers and their systems.

MANNING

8-4. Manning involves the personnel support activities that ensure the commander has the personnel required to accomplish the mission. It involves the management of personnel readiness, replacements, and casualties. Platoon leaders/platoon sergeants (PSG) must quickly and accurately report personnel status to the troop XO/1SG, who in turn sends the information to the CTCP via FM or FBCB2. Troop 1SGs ensure soldiers are in-processed into the unit and receive initial training on unit SOPs.

ARMING

8-5. Arming the troop is important to ensure it can protect itself when it physically contacts a threat force. The BSB transports ammunition during LOGPAC operations and may utilize aerial supply and airdrops, when available, to resupply the troop. Maintaining the unit basic load (UBL) of ammunition according to load plans on all combat and support vehicles within the troop is key to ensuring it is properly armed. Commanders must ensure that the UBL reflects the operational requirements based on the current mission. Basic loads may be adjusted for urban operations, stability operations, or in a high-armor threat environment. The arming system must be able to meet the needs of the troop through integration of supply, transportation, and maintenance functions.

FUELING

8-6. Fueling is the provision of petroleum, oils, and lubricants (POL) to the troop. Due to the BSB's limited ability to distribute fuel to the troop, maintaining POL UBL according to vehicle load plans will ensure

the troop has adequate fuel. All operations depend on movement of personnel, equipment, and supplies as well as the operation of equipment. Those activities are possible if logisticians are able to accurately forecast and effectively provide the fuel to meet these needs when required.

FIXING

8-7. Fixing the force is a vital component of ensuring maximum availability of scarce equipment to the commander. Fixing entails maintaining, recovering, repairing, and evacuating equipment. The troop's ability to conduct maintenance is limited to battle damage assessment and repair (BDAR), controlled substitution, extremely limited component replacement, and the use of any available floats. The cavalry squadron (RSTA) does have limited communications, missile, line replaceable units (LRU), electronics, and power generation repair. The BRT is normally supported by the brigade support company (BSC) of the brigade's forward support battalion (FSB). Operator PMCS cannot be stressed enough, and are essential to sustaining equipment and maintaining the troop's operational readiness. Prompt recovery and repair by organizational and unit-level maintenance elements and the operators are critical to keeping systems operational and reducing turnaround time. Battle damage assessment and evacuation keep the troop effort focused within its capabilities and recoverable equipment in the support system. Managing the limited repair parts is another critical part of fixing.

MOVING

8-8. Moving is inherent in all operations. Moving the force specifically relates to the planning and execution of the movement of soldiers, equipment, and supplies. It includes movement within the troop as well as to and from the support echelons. The limited transportation assets and the road networks they use must be managed with maximum efficiency. All vehicle movements should be planned in advance to ensure it is being used to maximize time and cargo space, to include tactical and support vehicles.

SUSTAINING

8-9. Sustaining soldiers involves the provision of a wide range of services and supplies. Quality of life for the soldier is a command responsibility. It affects the soldier's readiness and willingness to conduct missions. It is associated with services that directly ease his personal concerns, including personnel service, combat health, field service, and general supply support. Quality of life also depends on the knowledge that a soldier's family is receiving care. Soldier sustainment involves the following systems:

- **Personnel services support**. This support enhances soldier performance by providing services that bolster his morale and his sense of well-being. Specific functions include personnel services, religious support, legal service support, finance services, and resource management.
- **Combat health support (CHS).** CHS provides a continuum of health care from all locations throughout a theater to the continental US (CONUS) base.

- **Field service support.** This consists of a variety of capabilities designed to provide essential services and enhance a soldier's quality of life during operations. It includes food preparation, water purification, mortuary affairs support, airdrop support, laundry and shower services, and clothing and light textile repair.

8-10. FM 3-0 (FM 100-5) and FM 4-0 (FM 100-10) discuss these functions in detail.

COMBAT SERVICE SUPPORT CHARACTERISTICS

8-11. Sustainment enables the troop commander to accomplish the wide range of tasks he may be assigned. The logistics tail must not needlessly inhibit the operations of the troop. To meet this challenge, CSS leaders are guided by the following five imperatives when planning or executing:

- Anticipation.
- Integration.
- Continuity.
- Responsiveness.
- Improvisation.

ANTICIPATION

8-12. CSS leaders must not only support the ongoing operation, but also anticipate future events and requirements. The troop XO and 1SG must anticipate the needs of the unit as an operation is occurring, coordinate to push support forward, keep the commander abreast of CSS status and capabilities, and keep the support echelons informed of requirements. If CSS becomes reactive, support will be too late. The XO and 1SG, in conjunction with the BCT or squadron S4, must immediately begin planning when he receives the WARNO and FRAGOs. He must determine support requirements, coordinate changes to support relationships, and alert the supporting units to new trains positions to maintain the flow of support.

INTEGRATION

8-13. Commanders and staffs must integrate CSS into the planning process. At troop level, the commander, XO, and 1SG perform this function. At BCT/squadron level, the S4 has staff responsibility and works with the BCT/squadron commander, XO, S3, and HHC/HHT commander, and the BSB staff to ensure integration occurs. CSS leaders must identify sustainment problems during the estimate process and before the operation starts. Discussing CSS in maneuver and in fire support rehearsals is a highly recommended method to ensure the CSS plan is integrated and all planners and executors outside of the CSS arena (commanders, battle captains, S2, etc.) know of the plan.

CONTINUITY

8-14. Sustainment efforts are continuous. CSS is never in reserve. Support continues during preparations before an operation begins, during the operation, and afterwards as the troop reconstitutes or prepares for another mission. Operator and organizational maintenance and repair work is done whenever the opportunity exists. Repairing and returning

damaged equipment to the fight requires early diagnosis and identification of faults and is done as far forward as possible. Immediate resupply is conducted when needed, but routine resupply (LOGPAC) is the standard. Vulnerability and limited cross-country mobility of CSS vehicles dictate the predominant use of road and trail networks. Continuous CSS operations require careful personnel management to provide sustained effort. Local security, routine details, and operator maintenance all compete for time with CSS operations. Fatigue can quickly degrade the effectiveness of soldiers who must simultaneously provide continuous support to the squadron and maintain their own equipment. Carefully planned and strictly enforced rest plans help to ensure continuous support.

RESPONSIVENESS

8-15. Responsiveness is the ability to meet changing or unforeseen requirements on short notice. The CSS system must be as agile as the maneuver system to allow the commander to successfully seize opportunities or exploit tactical success.

IMPROVISATION

8-16. Improvising is essential as CSS leaders seek to solve significant, often unanticipated problems. These problems may be caused by threat action against the support system, mass casualties and destruction of maneuver assets, environmental conditions of the AO, or disruptions of command and control. Normal operating procedures may be suspended and extraordinary measures taken to overcome the problem. Agility, initiative, and ingenuity on the part of CSS leaders are essential.

8-17. These imperatives should be encompassed in SOPs as they establish the focus for organization and operations of the CSS system. FM 3-0 (FM 100-5) and FM 4-0 (FM 100-10) provide background on these imperatives.

SECTION II – ORGANIZATION

8-18. Troop trains are made up of immediate battlefield service support systems. The remainder of the troop CSS elements is collocated with its parent unit's CSS assets in the brigade or squadron combat trains. The troop CSS team consists of the troop XO, 1SG, supply sergeant, communications soldier, NBC sergeant, armorer, and the troop senior medic. In addition to the senior medic, a medical/evacuation team may be attached to the troop for combat operations from the medical platoon.

FBCB2 ROLE IN COMBAT SERVICE SUPPORT

8-19. There is no dedicated service support radio net at troop level. All logistical reports and initial requests for logistical support are conducted on the troop command net, or on a designated net identified in the unit's SOP or order. Additional coordination is conducted on the platoon radio nets. Routine reports are sent before and after combat operations, and are delivered by FBCB2. All service support coordination with the brigade or squadron is conducted on the A/L net and by FBCB2 logistics status (LOGSTAT) reports. The 1SG operates on the A/L net. The CP monitors the A/L net, but uses it when necessary to forward reports and

to conduct logistical coordination. The troop's CSS team uses FBCB2 to manage the CSS requirements for the troop.

FBCB2 LOGISTICS STATUS REPORTING

8-20. LOGSTAT reports are divided into two categories with respect to their routing requirements—individual platform reports and unit roll-up reports. The report will show the amount units have in their Class I, II, III, IV, V, and VIII supplies. It reports what is on-hand and serviceable. For Classes VII and IX, the LOGSTAT reports whether what is on-hand is fully mission capable or not.

8-21. The LOGSTAT reporting chain is as follows:

- Individual platform LOGSTATs are prepared and submitted by *all* platforms. Addressed to sending platform PSG for action and platoon leader/OIC for information.
- Platoon roll-up LOGSTATs are prepared and submitted by *all* PSGs. Addressed to sender's team/company 1SG for action and to the platoon leader/OIC for information.
- Troop roll-up LOGSTATs are prepared and submitted by *all* troop 1SGs. Addressed to the squadron S4 CTCP FBCB2 for information and brigade S1/S4 rear CP for action. The brigade rear CP will forward to the CSSCS company-level LOGSTATs (i.e., not rolled up above company level). CSSCS cannot process battalion or brigade rolled-up reports.

FBCB2 LOGISTICS CALL FOR SUPPORT

8-22. Call for support (CFS) is used in accordance with unit SOP to send digital requests for support to either the supporting forward support company (FSC), brigade rear CP, or BSB. When a CFS message is received, the logistics task order (LTO) thread is initiated by the tasking authority. The LTO thread is composed of the CFS, the LTO message, the task synchronization message, and the task status message. Once a CFS has been sent, the rest of the logistics messages are accessed through either the logistics task management application or the long form reports screen. All active CFS will appear on the LTO matrix. (See Figure 8-1 for the CFS thread in FBCB2.)

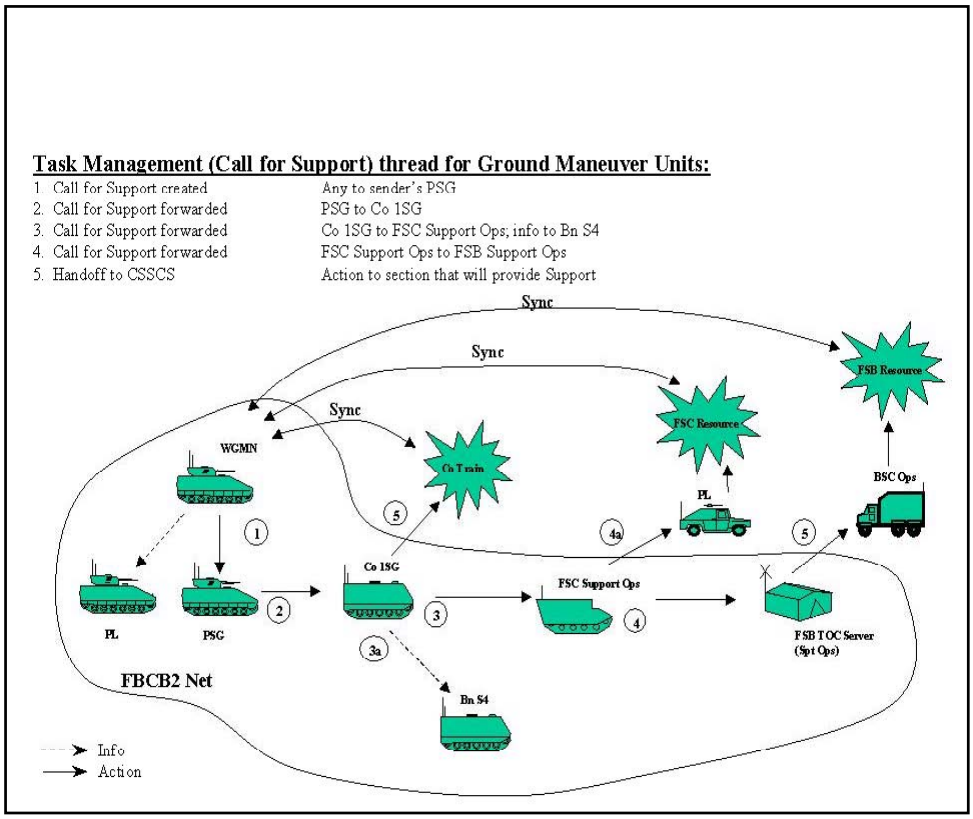


Figure 8-1. Call for Support Thread in FBCB2

TROOP TRAINS

8-23. The troop trains provides CSS for the troop during combat operations. The 1SG directs movement and employment of the troop trains. He receives logistical reports directly from the PSGs or through the troop CP, coordinates logistical matters with the XO, and assists the XO in ensuring the troop is logistically ready for battle. During operations, the 1SG coordinates and directs the evacuation of casualties and equipment to designated troop or squadron logistic release points (LRP), which are graphically depicted by checkpoints, leads the troop LOGPAC forward from the LRP to resupply the troop and then leads it back to the LRP; and organizes the LOGPAC to conduct troop resupply operations. Depending on METT-TC, PSGs may assume the 1SG's role for their platoon and may have to coordinate with the CTCP for the platoon's logistical support.

8-24. The troop trains may be collocated with the troop CP, or it may operate separately under the control of the 1SG. Threat situation and distances between the platoons are some of the major determining factors. The troop trains may consolidate or coordinate with a task force trains or task force main CP, if locations and distances allow for collocation. This method alleviates stress on the troop's limited CSS assets and maximizes the brigade support area's (BSA) assets.

LOCAL SECURITY

8-25. Trains must provide their own local security. They do not have the manpower or equipment to clear large areas, so they should move into areas that have already been cleared by scouts. The trains' best defense is to avoid detection. The trains should disperse their vehicles and camouflage the positions by using natural concealment like a wooded area or a small built-up area. A built-up area is best because there are a limited number of approaches and the thermal signature of the trains is concealed. Enforce strict noise and light discipline. Hide vehicles in barns or garages, if available. The buildings in a built-up area and the trees in a wooded area provide some protection against the effects of indirect fires and air-delivered munitions. Dispersion also limits the damaging effects of these weapons.

8-26. Establish OPs around the trains to provide early warning of threat movement toward the position. Put them where they can cover major avenues of approach. An OP has at least two soldiers, a crew-served weapon (if available), a map, binoculars, a night observation device, and a radio or field phone. The OP must immediately report, by radio or phone, threat ground and air attacks so the trains can take appropriate actions.

8-27. Passive defense is the trains' best defense against air attack. The steps taken to locate them properly, disperse vehicles, camouflage positions, and use the cover and concealment of built-up or wooded areas help prevent the threat from detecting and attacking, and if attacked, limit the effects of threat munitions.

8-28. Air attacks cannot always be avoided. If attacked, take active air defense measures. The 1SG or senior soldier present must coordinate the small arms fires of the trains for them to be effective against an air threat. Refer to Chapter 6 of this manual for more information on passive and active air defense.

8-29. Collocation with the troop CP or another trains element provides additional personnel for security for both the CP and trains.

PLANNING

8-30. CSS planning must be fully integrated into all operations planning; it is the primary responsibility of the troop XO and 1SG. Logistics support must be synchronized with the concept of operations. CSS planning is continuous and concurrent with ongoing support execution, and is conducted to ensure support during all phases of an operation. Troop orders should address only specific support matters for the operation and any deviations from SOP. The troop SOP should be based on the squadron's CSS operations.

8-31. At troop level, CSS planning is informal; it is normally formulated in terms of the following considerations:

- Current and projected unit status of maintenance and supply.
- Quantities and types of logistics needed to support the troop's operation.
- How it will be transported.
- When it must be on hand.
- Required displacement of CSS assets.

- Shortfalls and impact on the operation.
- Supportable courses of action in priority.
- Availability of MEDEVAC and treatment.

8-32. The information to address many of these considerations should be found in the higher unit's OPORD. Troops frequently use the "push" concept of resupply. Under this concept, standard loads of supply are brought forward to platoons unless a specific request is made otherwise. Thus, LOGSTAT reports are used by the parent unit to preconfigure supply loads and anticipate future demands.

SUPPORTING OFFENSIVE AND RECONNAISSANCE OPERATIONS

8-33. During operations that are mobile, such as reconnaissance, establishing troop LRPs or using higher's LRPs throughout the zone or area is essential to supporting the troop. These LRPs may either be casualty collection points, vehicle recovery points, or a combination of both. Unit SOPs must be specific about who (section leader/PSG/1SG) evacuates casualties and equipment and where they are taken (LRPs or MSR). If trains are augmented with maintenance, medical, or emergency resupply vehicles, position the troop trains in the center of the troop zone and about two kilometers or one terrain feature behind the trail element. Use the established road network, if possible, to move the trains. Bound the trains forward to successive concealed positions, based on the movement of the troop, to keep them in position to support the troop. The availability of adequate supplies and transportation to sustain the reconnaissance operation becomes more critical as the operation progresses. MSRs lengthen, communications are strained, and requirements for repair and replacement of weapon systems increase. The availability of adequate supplies and transportation to sustain the operation becomes more critical as the operation progresses. Additional reconnaissance planning considerations are listed below.

- Ensure basic loads remain replenished.
- Plan for an increased consumption of POL.
- Use push packages of preplanned and preconfigured essential logistics items.
- Plan for increased vehicular maintenance, especially when operating over rough terrain.
- Use maintenance support teams well forward.
- Use captured threat supplies and equipment, particularly support vehicles and POL. Test POL for contamination before using.
- Vehicles must be well marked to prevent misidentification and engagement by friendly units.
- Test natural water sources before using.
- Select supply routes, LRPs, and subsequent trains locations for the entire operation. Plan alternate routes and means.
- Plan for increased casualties, use of casualty collection points, and use of aeromedical evacuation resources.
- Upload logistics required for the operation in advance as much as possible.
- Plan for increasing distances and longer turn-around times for MSR operations.

SUPPORTING DEFENSIVE AND SECURITY OPERATIONS

8-34. During operations that are static in nature, such as screen missions, the same considerations for mobile missions apply. If the trains are augmented with maintenance, medical, or emergency resupply vehicles, position the troop trains about three kilometers behind the troop's screen positions in the center of the troop sector. If possible, hide the trains in a small built-up area, which provides cover and concealment, and use an established road network to facilitate the movement of the trains. The trains must be ready to move to support the troop or displace to a new location. The XO and 1SG plan subsequent locations, and as the situation requires, the 1SG or maintenance sergeant moves the trains to the next location.

8-35. Defensive-oriented security missions and defensive missions assigned as economy of force have similar general planning considerations. These missions tend to be dynamic in nature, involving substantial maneuver. As they become more dynamic, certain planning considerations for reconnaissance apply. The most important consideration for security operations is best use of available preparation time and front-loading of the CSS effort. As with reconnaissance, emphasis on any particular consideration varies with the mission assigned and shifts during mission execution. Planning considerations include the following actions:

- Plan for increased use of Class IV and Class V.
- Preposition limited amounts of ammunition, POL, and barrier material in centrally located forward positions.
- Preposition ammunition and other critical supplies on subsequent positions in depth.
- Use push packages of critical supplies on a scheduled basis. Continue resupply until the last possible moment.
- Resupply during limited visibility to reduce the chance of threat interference.
- Prepare to conduct emergency resupply on short notice well forward during lulls in the battle or as required.
- Plan displacement of CSS assets so uninterrupted support continues.
- Select MSRs that do not interfere with movement of units or a reserve force. Plan alternate routes and means.
- Plan mobility operations to maintain MSRs.
- Plan alternate means of evacuation for casualties.
- Emphasize recovery and evacuation of equipment over forward repair to preclude loss to the threat. Use all available noncombat vehicles to tow disabled vehicles.

CAVALRY SQUADRON (RSTA) COMBAT SERVICE SUPPORT

8-36. To ensure responsive CSS for the squadron, the S4 organizes the squadron support into echeloned trains and establishes a MSR, a UMCP, and an LRP. These trains are made up of combat trains (which provide immediate recovery, maintenance, medical, and emergency resupply support), and field trains (which provide the remainder of the squadron service support and limited direct support maintenance). The UMCP is

established to provide maintenance support for combat operations. It is collocated with the squadron combat trains, and is the closest point to which damaged or failed equipment and systems are recovered. The UMCP is the focal point of the squadron maintenance effort. The MSR links troop trains to the squadron combat trains and the field trains. LRPs are established along the MSR to facilitate the handover of LOGPACs and equipment between the troops and the squadron. An example of a squadron support plan is shown in Figure 8-2.

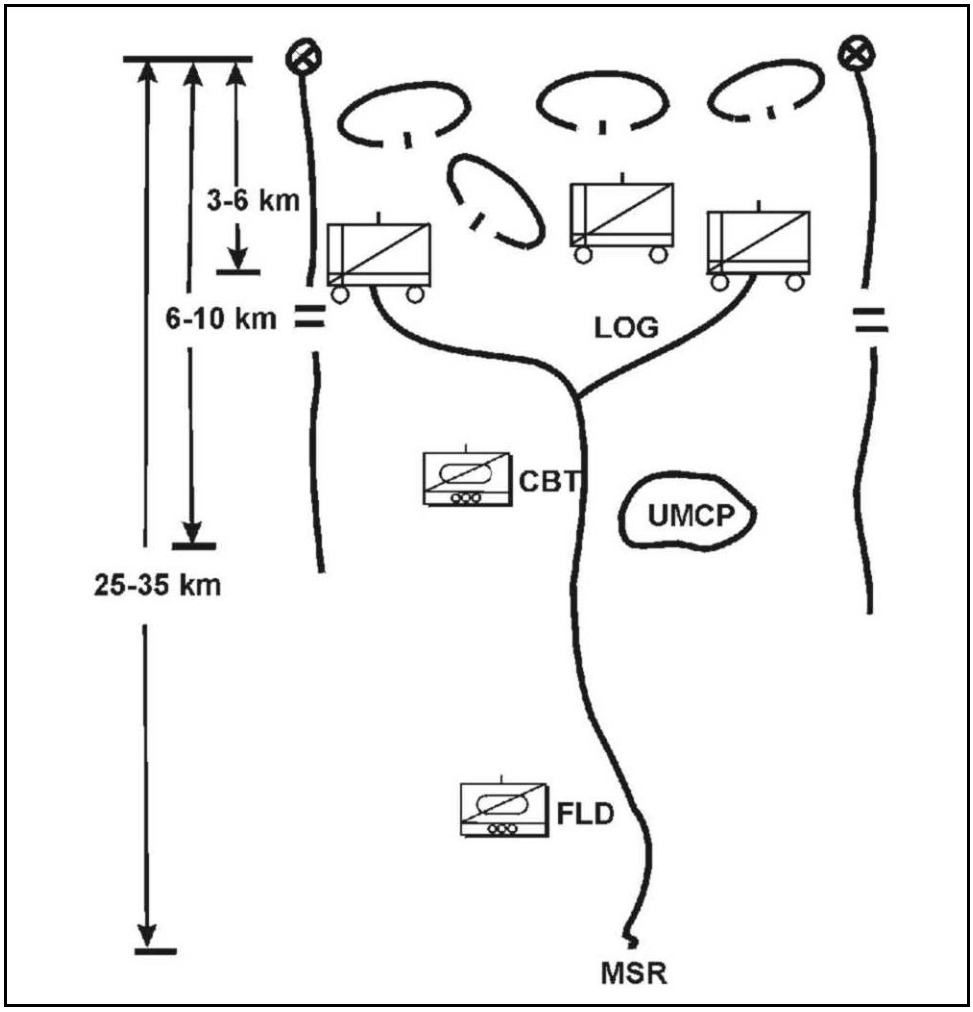


Figure 8-2. Squadron Combat Service Support Plan

SQUADRON COMBAT TRAINS

8-37. The combat trains are located between the BSA and the reconnaissance troops. Combat trains are the forward CSS element of the squadron. The squadron S4 and S1 with their personnel run the combat trains from the CTCP. The combat trains also include the medical platoon headquarters, two medical treatment teams, five MEDEVAC teams, the medical supply vehicle, and the combat repair team (CRT).

8-38. The combat trains are responsible for coordinating all classes of supply, personnel, and maintenance support, to include evacuation of

casualties and equipment from the troops to the combat trains for further evacuation to the BSA.

8-39. The combat trains can establish operations in various locations throughout the AO. The level and capabilities of the threat (security), and the dispersion/distance of the troops and squadron main CP determine positioning of the combat trains. The combat trains can locate/collocate in either of these areas:

- **Independent/not collocated**. The threat is low, or not capable of finding small, hidden, and dispersed elements. Dispersion between troops is great and the combat trains need to move forward to provide better support.
- **Collocated with squadron, infantry, or artillery battalion CP**. Collocation affords better security and C2 within an area.
- **Consolidated trains.** This method is used when the forward elements of the squadron are within a closer supporting distance of the BSA (less than 30 kilometers). Consolidated trains afford better C2 of the squadron's CSS assets.
- **Collocation with infantry or artillery battalion trains.** Provides additional security, assists in deconfliction of AOs, and maximizes the limited CSS assets of the brigade.

8-40. The troop supply sergeant, shown with driver and vehicle in Figure 8-3, is the troop representative in the squadron combat trains.

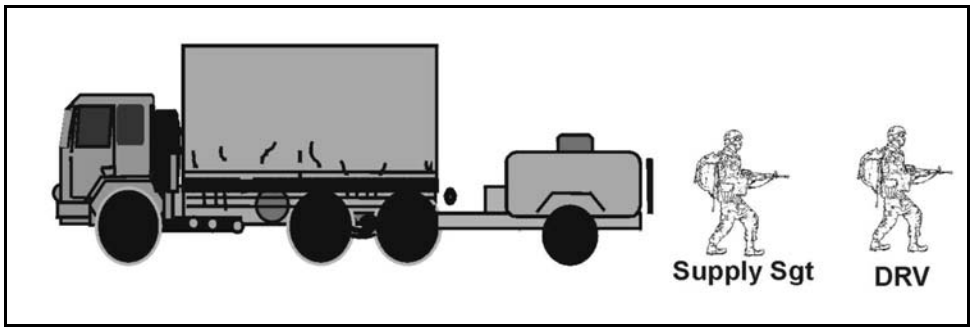


Figure 8-3. Troop Supply Sergeant, Driver, and Vehicle

8-41. The supply sergeant is responsible for the following tasks:

- Maintaining records of troop clothing and equipment.
- Processing or forwarding requests for all Classes I, II, III, IV, V, VI, and VII. He also assists medics in resupplying Class VIII (medical) and the maintenance section in ordering Class IX repair parts.
- Transporting personnel to and from the field trains, when required.
- Assisting the 1SG in organizing the LOGPAC site for troop resupply and in evacuating soldiers who are killed in action (KIA), EPWs, and disabled vehicles; and in medically evacuating wounded and injured soldiers.
- Delivering mail, when available, via the troop LOGPAC.

8-42. At the squadron combat trains, the supply sergeant coordinates with the S4 and the squadron field trains (located in or near the BSA) via radio or FBCB2 to ensure the LOGPAC meets the troop's CSS requirements. The squadron's LOGPAC meeting serves to coordinate the requirements for the next LOGPAC.

8-43. The supply sergeant coordinates with the S4 for parts and maintenance and with the squadron personnel and administration center (PAC) section for mail, promotions, awards, Standardization Installation/Division Personnel System (SIDPERS), and other personnel actions. The supply sergeant must frequently check with the HHT CP in the field trains for any additional troop requests reported on the A/L net.

8-44. The squadron combat trains is responsible for its own local security. The supply sergeant will be tasked to assist the S4 in maintaining security of the combat trains. He must execute and supervise security operations in accordance with the S4's plan. During the movement through nonsecure areas, the supply sergeant should ensure that all crew-served and individual weapons are manned and ready. He should also ensure that all members of the troop combat trains are briefed on immediate action drills for threat contact or vehicle breakdowns.

SQUADRON FIELD TRAINS

8-45. The squadron field trains is the primary direct coordination element between the squadron and the BSA. The field trains may collocate with the BSA, operate independently between the BSA and combat trains, collocate with the squadron trains, or with the nearest trains of the infantry battalions. Field trains location is determined by the level and capabilities of the threat and the distances between the forward elements of the squadron and the BSA. The field trains will normally consist of the HHT commander, XO, 1SG, NBC NCO, and supply sergeant. The field trains ensure the LOGPACs are organized and configured per the unit's requests and that the LOGPAC makes it forward, at a minimum, to the combat trains and back to the BSA.

BRIGADE RECONNAISSANCE TROOP COMBAT SERVICE SUPPORT

8-46. The BRT has no organic logistics capability and requires detailed planning for support by the brigade staff. The BSC of the FSB normally supports the BRT. If the situation permits, the BSC pushes assets forward to designated LRPs to meet the BRT's needs. Alternately, the brigade assigns subordinate task forces the responsibility to support the logistics requirements of the troop. Reference FM 3-90.3 (FM 71-3) for the capabilities and organization of the brigade's CSS assets. Regardless of the arrangement, the BRT ensures that the brigade staff considers the following items during planning:

- Passage lanes and coordination points to move logistics assets safely through the MBA into the brigade's security zone.
- Casualty collection points for the troop to conduct self-evacuation.
- Positioning of ambulance exchange points (AXP) and aid stations to support CASEVAC.
- Medical air evacuation plan.

- LRPs and LOGPAC schedule for Classes I, III, and V resupply.
- Designating a combat force to fight to extract brigade ISR assets, if required.
- Planning for logistical refit of the BRT between operations.

8-47. The BRT supply sergeant, shown in Figure 8-4, is the troop representative in the brigade's combat trains.

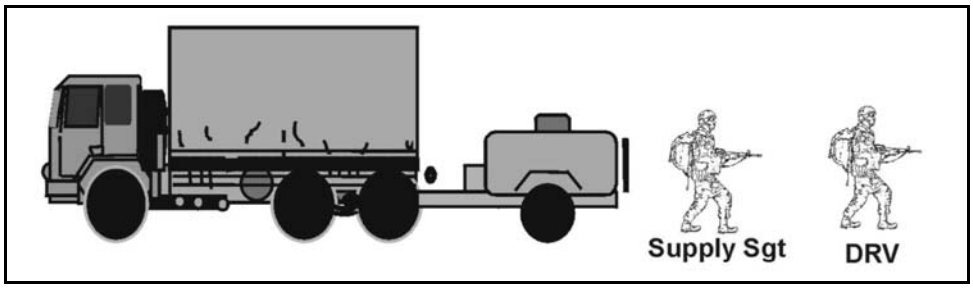


Figure 8-4. Brigade Reconnaissance Troop Supply Sergeant

8-48. The BRT supply sergeant's duties and responsibilities are the same as the recce troop's supply sergeant. Since the BRT has no supporting combat trains, the BRT coordinates directly with the BSC.

SECTION III – LOGISTICS

SUPPLY OPERATIONS

8-49. The supply sergeant is responsible for getting supplies and delivering them to the troop. He delivers small items, but is largely dependent on BSA assets to deliver bulky or high expenditure items. The commander establishes priorities for delivery, but the demands of combat normally dictate Classes I, III, V, VIII, and IX as most critical.

CLASS I (RATIONS)

8-50. Meals ready to eat (MRE) are stocked on each troop vehicle in a basic load prescribed by SOP (three-day supply). Class I is delivered daily by the supply sergeant as part of the LOGPAC from the squadron field trains. Hot meals (B or tray-pack rations) are served when possible, but the normal ration cycle is C-C-C during combat operations. This requires resupply of at least 34 cases of MRE per day per troop. Water is a critical item, and must be resupplied daily. Soldiers may require up to five gallons of water per soldier per day, or more than 600 gallons for the entire troop. The troop can transport only 400 gallons of water on the water trailer. Soldiers should top off their water cans when possible. The supply sergeant should carry five-gallon cans of water on his truck to supplement the needs of the troop. When he resupplies the troop, he exchanges the full cans for empty ones.

CLASS II (SUPPLIES AND EQUIPMENT)

8-51. Class II items are requisitioned through the S4 and delivered by the supply sergeant as needed. The troop also maintains the following supplies, as a minimum:

- One case of BA-30s.
- One mile of WD-1 wire.
- Additional batteries as necessary for night-vision devices and other equipment.
- Five sets of CTA-50, to include personal clothing of various sizes, stored in duffel bags.
- Fifteen body bags.
- Map cases, grease pencils, permanent markers, etc.

CLASS III (PETROLEUM, OIL, AND LUBRICANT)

8-52. Class III is delivered by BSA assets both as part of the troop LOGPAC and on an as-needed basis. PSGs report their Class III status to the CP daily, when status is requested, or when any Class III item is below a certain percentage, usually 59 percent.

8-53. Each troop vehicle carries a small basic load of packaged products as prescribed by SOP, and the fuel carriers normally have only small amounts of packaged products on board. Requests for large quantities of packaged products must be requested through the S4.

CLASS IV (CONSTRUCTION MATERIALS)

8-54. Class IV supplies are requested through the CTCP and delivered by the supply sergeant with the LOGPAC. Class IV supplies needed at troop level may include concertina wire, sandbags, and lumber.

CLASS V (AMMUNITION)

8-55. The troop deploys with a basic load of Class V as prescribed by the unit for each type of vehicle. Ammunition status is reported by PSGs to the CP daily, upon completion of threat contact, or as needed. Normal resupply of Class V is delivered with the LOGPAC. Emergency resupply is requested through the 1SG to the S4, and is delivered from the combat trains if it is available. Emergency resupply of Class V will normally consist of ammunition for major weapon systems.

CLASS VI (PERSONAL DEMAND ITEMS)

8-56. Class VI items (such as soap, toothpaste, and cigarettes) are requested through the S4 by the 1SG. They are usually delivered as part of the LOGPAC.

CLASS VII (MAJOR END ITEMS)

8-57. Class VII items, such as vehicles and night-vision devices, are automatically requested based on equipment shortages and battle losses. Items are delivered to the field trains, which notifies the troop of the availability of the equipment. The equipment is delivered with a LOGPAC or brought forward immediately to an LRP where the 1SG meets it and delivers it to the troop.

CLASS VIII (MEDICAL SUPPLIES)

8-58. The recce troop's Class VIII is provided by the squadron medical platoon. The troop senior medic requests supplies through the squadron

aid station. During intense combat, supplies may be pushed forward. They are then delivered to the combat trains where the troop medic picks them up from the squadron aid station, or they are brought forward on ambulances. The BRT's Class VIII is coordinated through the brigade HHC. It is provided by the BSC and delivered to the troop via LOGPACs.

CLASS IX (REPAIR PARTS)

8-59. The troop XO consolidates DA Forms 2404 and/or 5988E and sends them to the S4 and/or the CRT auto repair supervisor, also known as the motor sergeant. The CRT motor sergeant requisitions, receives, and maintains records for all Class IX items through the CSSCS for the troop. When the troop XO needs a repair part, the request is sent through the CTCP/S4 to the CRT motor sergeant. The CRT motor sergeant determines if the part is available through the maintained combat spares and fills the request if possible. If the part is not in the combat spares, he requests it through the maintenance control section of the BSB in the BSA, using CSSCS. When the requisition is filled, the part is delivered through the combat trains, using LOGPAC when feasible. The motor sergeant updates the records to reflect the requisition.

MAPS

8-60. Maps are requested through the troop CP to the S4. As maps are available, the supply sergeant picks them up in the field trains and delivers them to the troop as part of a LOGPAC. The S2 also has access to digital mapping products and special maps developed by the topographic engineers.

RESUPPLY OPERATIONS

8-61. Resupply of combat resources is accomplished using standardized procedures to rearm, refuel, and refit the troop as fast as possible to sustain its combat potential. For the BRT, resupply operations are complicated by limited CSS assets organic to the troop, the location of BRT platoons and sections forward of the BCT's FEBA, and the requirements to secure any resupply assets that must go forward to the BRT's forward positions.

8-62. The BCT staff must conduct detailed planning and coordination to effect combat resupply of BRT elements forward of the BCT's FEBA. The BRT elements should carry a three-day supply forward. The BCT should plan on extracting BRT elements prior to their three-day supply being used and conduct resupply of those elements in the BRT assembly area. When this is not feasible, the troop XO and 1SG along with the BCT staff must plan and coordinate for ground infiltration or aerial insertion of supply to designated drop off points or cache points to support the forward OPs.

8-63. Routine resupply (Classes I, III, V, IX; mail; and other items needed by the troop) occurs when the troop is not in contact or when the troop commander decides the risk of not conducting resupply outweighs the risk of interrupting ongoing operations. Resupply may be conducted in an assembly area or behind troop positions when the troop is deployed in sector or zone.

8-64. Routine resupply is conducted using the LOGPAC from the field trains and the troop trains. The LOGPAC is organized in the BSA. Its composition is based on the troop's needs as reported to the S4, requisitions, and the availability of supplies. Field trains personnel ensure that all available supplies are picked up and organized by troop. If personnel are to be brought forward, the supply sergeant should be informed so he can go to the field trains and pick them up if no transportation assets are available in the BSA. The designated field trains representative leads the LOGPAC to the LRP, where the 1SGs meet them. Each 1SG leads his LOGPAC to the troop resupply site. When it arrives, members of the troop trains guide the LOGPAC vehicles into position. Once the LOGPAC is established, the 1SG reports to the CP that he is set. The troop commander or the XO coordinates resupply operations, and ensures all platoons and sections are resupplied. Security of the LOGPAC is extremely important. Crew-served weapons should be mounted and manned on all support vehicles. When available, combat vehicles should provide escort service.

8-65. Resupply is conducted by one of two basic methods—tailgate issue or service station. Either method may be performed at troop or platoon level, depending on dispersion of the platoons.

TAILGATE ISSUE METHOD

8-66. The tailgate method is used in static positions such as assembly areas. Class III and V supply vehicles and other bulk-issue vehicles move from vehicle to vehicle to conduct resupply. The rest of the service support vehicles are centrally located in the troop area. Little or no movement is required by the combat vehicles. Personnel move to a centralized location to receive supplies, Class I, and mail. This method provides 360-degree security throughout the resupply operation; however, it is very time-consuming and requires an adequate road network for the wheeled supply vehicles to reach each vehicle. See Figure 8-5 for an example of this method.

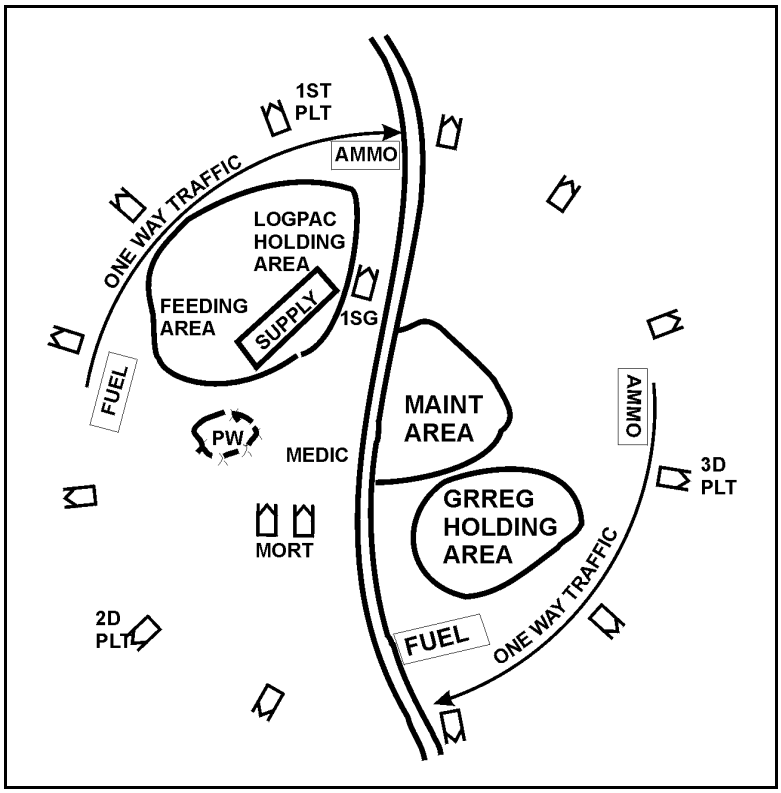


Figure 8-5. Tailgate Issue Method in a Troop Assembly Area

8-67. The following takes place during tailgate resupply:

- Combat vehicles remain in place. POL and ammunition trucks travel in a clockwise direction around the assembly area to each vehicle position, in turn, to conduct resupply.
- Crewmen rotate through the feeding area and pick up supplies, water, and mail.
- The 1SG and PSGs arrange for pickup of those KIA and their personal effects. The KIA are brought to a graves registration (GRREG) holding area near the medical aid station, but kept out of view.
- Ambulances pick up, treat, and evacuate seriously wounded soldiers. Other wounded soldiers are carried to the ambulance or walk to it for emergency medical treatment.
- Prisoners are kept together and guarded. As soon as possible, they are moved to the squadron trains on a returning supply vehicle.
- The troop armorer, the radio repairman, and the organizational mechanics repair known problems and spot-check other vehicles.
- Vehicles needing maintenance are brought to the maintenance area.
- The 1SG and PSGs closely monitor the resupply operation.

- Empty LOGPAC vehicles are moved to a holding area, where they are loaded with KIA, EPWs, and inoperative equipment.
- The supply sergeant moves the LOGPAC back to an LRP to link up with the support platoon leader and return to the field trains.

8-68. Due to the limited assets in the brigade, tailgate issue is the least preferred method. It will occur only if it allows for faster service than the service station method or for better OPSEC.

SERVICE STATION METHOD

8-69. Service station resupply is used during tactical operations. It is most effective when the troop is positioned in an AO no more than 3 to 5 kilometers wide, such as is found in a defend in sector or defend from a troop BP mission. Platoons or sections are resupplied at the LOGPAC while the rest of the troop stays in position. The 1SG sets up the LOGPAC as shown in Figure 8-6. LOGPAC security is provided by soldiers from the combat trains who are not involved in the resupply, and by platoon vehicles that have completed or are awaiting resupply.

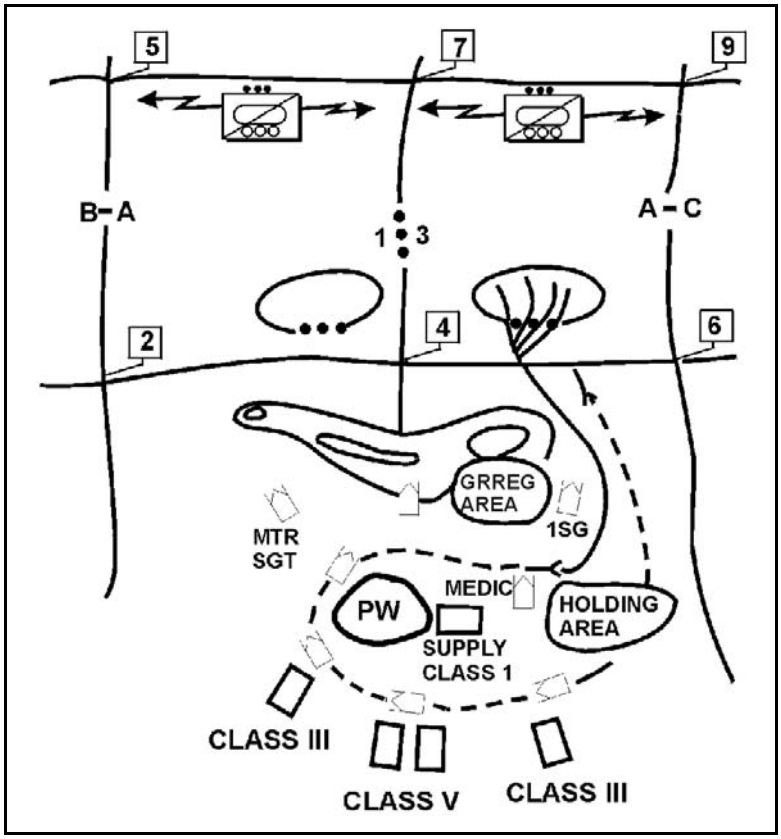


Figure 8-6. Service Station Resupply Method

8-70. The following takes place during service station resupply:

- Vehicles of the first platoon or section enter the LOGPAC at a designated location and follow one-way traffic flow.
- The vehicle carrying the KIA in body bags moves to the holding area, out of view of the troop, and leaves the remains and personal effects.
- Soldiers requiring medical attention are delivered to medics and treated or prepared for evacuation.
- The PSG supervises the operation and coordinates face-to-face with the 1SG for any special requirements.
- The platoon leader dismounts his vehicle and uses the 1SG's vehicle and radio to contact the troop commander for orders and SITREPs.
- Crews requiring unit-level maintenance remain in the maintenance holding area.
- Vehicles rotate through stations.
- Unit-level mechanics, the armorer, and the radio repairman repair known problems and spot-check other vehicles.
- Crews rotate to the supply truck to pick up mail, supplies, and Class I.
- The platoon leader and PSG conduct precombat inspection.
- When the platoon or section has completed resupply, it moves to its designated position.
- The rest of the platoons rotate individually through the LOGPAC for resupply.

COMBINATION METHOD

8-71. The reconnaissance troop can vary the specifics of the two basic techniques, or it can use them in combination. During a screening mission, for example, it may use the tailgate method for its most forward OPs and the service station method for its OPs in depth. (See Figure 8-7.)

8-72. At the end of the resupply operation, the troop LOGPAC returns to the LRP to link up with the representative (combat or field trains representative) who led the LOGPAC forward, and returns to the BSA.

AERIAL RESUPPLY

8-73. Helicopters can be a vital lifeline when reconnaissance troops are forced to operate forward of friendly lines for extended periods. Aerial resupply operations may reduce the risks associated with conducting ground resupply operations under such conditions; however, they require significant planning and entail a different set of risks to consider. Aerial assets are also useful in resupplying dismounted reconnaissance troops in OPs in restricted terrain. On the other hand, aerial resupply sometimes will not be feasible because helicopters are not available. In addition, the signature of resupply helicopters can compromise troop positions. Careful choice of resupply routes and landing zones helps to minimize this risk.

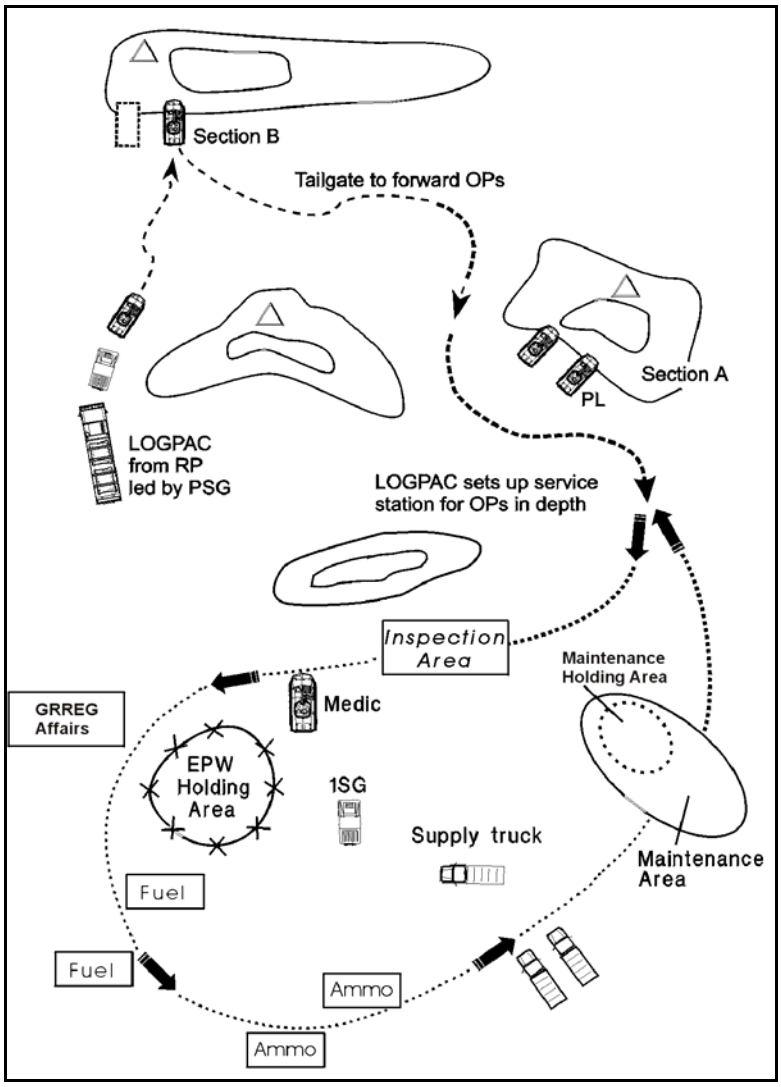


Figure 8-7. Combination of Resupply Techniques

TROOP PRESTOCK OR CACHE

8-74. These resupply techniques, also called prestock resupply, differ in the level of security provided for the supplies. In prepositioning, supplies are generally left unattended, without security, although steps should be taken to prevent detection of the location by threat elements. When the unit resupplies by cache, it should leave security personnel to guard the site.

8-75. Both prepositioning and cache can be used in a variety of reconnaissance or security operations. During reconnaissance, prestock positions can be established along the intended route of advance or near the objective by advance elements. In security operations, the reconnaissance platoon can set up prestock points throughout the AO. These points should be in each alternate or supplementary OP, in addition to other locations throughout the depth of the sector. Scouts can also use prestock to provide resupply for patrols.

8-76. Prestock operations must be carefully planned and executed at every level. Prestock points should be placed where they can be located by simple instructions that are clear to someone who has never visited the site. All leaders, down to vehicle commander and squad leader, must know the exact locations of prestock points. As noted, the troop CSS team must take steps to ensure security and survivability of prepositioned supplies by digging in prestock positions, selecting covered and concealed positions, and considering the effects of weather and terrain. The CSS team must also have a plan to remove or destroy prestock supplies to prevent the threat from capturing them.

EMERGENCY RESUPPLY

8-77. Emergency resupply normally involves only fuel and ammunition and is conducted while in contact with the threat. The resupply begins at section and platoon level by redistributing ammunition between vehicles to cross-level loads. The PSG reports his need for emergency resupply to the 1SG, who relays the request to the S4. The unit's combat trains may maintain a small load of Class III and V for these situations. The BRT may need to coordinate with a task force for emergency resupply. The S4 or support platoon leader coordinates a linkup between the combat trains and the troop 1SG. The 1SG meets the resupply trucks and moves back to the troop area. The 1SG and troop XO choose a resupply point that is just behind the troop position and masked by terrain from threat direct fire and observation. If fuel is needed, the fuel truck is moved to the resupply point and vehicles or sections go there to refuel. Emergency resupply should occur only because the rate of fuel and ammunition expended is greater than expected, and not due to lack of CSS planning and operations.

RESUPPLY SITE SELECTION

8-78. The LOGPAC site must be carefully chosen to provide responsive support for the troop, to support the movement of wheeled resupply vehicles, and to limit exposure to threat fires. The 1SG selects the exact location to be used by the LOGPAC. He knows about the current tactical situation, and can determine what the troop will be doing in the next couple of hours. The 1SG selects the exact LOGPAC site based on map and ground reconnaissance. He selects a site that provides—

- Cover and concealment.
- Proximity to the platoon positions, from 3 to 8 kilometers behind the FLOT and center of the sector.
- A road or trail network that supports the wheeled resupply vehicles and the heaviest troop vehicles and allows one-way traffic flow to the LOGPAC.
- Enough room to disperse the vehicles.
- Reduction of thermal signature.
- Terrain level enough to allow refueling.

MAINTENANCE AND RECOVERY OPERATIONS

8-79. The decrease in the CSS footprint has caused a shift to a "replace forward/fix rear" system. Replace forward means a soldier performs "on-system" maintenance. On-system refers to replacing components or subcomponents at the point of repair, breakdown site, or UMCP. Replace

forward/fix rear is a maintenance conservation concept for replacing LRUs or modules instead of attempting to repair the LRUs or modules. Repair rear means that soldiers perform "off-system" maintenance. Off-system maintenance refers to those actions taken to return components or subcomponents of weapons systems to serviceable condition. These actions occur at designated places throughout the battlefield.

8-80. The troop XO and 1SG are responsible for the coordination and conduct of maintenance in the troop. The troop armorer is responsible for unit-level maintenance and repair of the troop's small arms weapons. He is positioned in the combat trains where he can provide battlefield support.

MAINTENANCE OPERATIONS

8-81. Maintenance responsibilities begin at crew level. Operator-level PMCS must be performed before, during, and after operations. During operations, the crew begins the maintenance process when it identifies the fault. Once a problem develops, the vehicle commander determines support requirements, to include self-recovery, assistance from another vehicle, or assistance from the CRT, and takes the following actions:

- Reports the situation to the PSG, providing condition(s), location, and circumstances.
- Attempts to self-recover, if mired.
- Uses another vehicle to move to a secure location if exposed to threat observation and fire. Uses smoke to screen the area between the mired vehicle and the threat.

8-82. When repairs are beyond the capability of the crew (replace forward), the PSG uses the troop command net to notify the 1SG of the situation and to request assistance. The crew must maintain radio contact (if the radio is operational) on the platoon net and maintain local security. The 1SG contacts the CTCP with an FM message and follows it up with an FBCB2 free text message. The CTCP needs the following information:

- Identification of the troop.
- Equipment involved.
- Location of equipment.
- Nature of damage.
- Pertinent information about the tactical situation, and any other necessary information.

8-83. CRT mechanics are dispatched to evaluate the situation. The CRT checks whether the problem can be corrected in place within the time criteria established in unit SOPs. If repairs will take more than the allowable time, evacuate the equipment to squadron UMCP (fix rear).

8-84. Based on the information above, the S4 will designate a time and place for equipment handover.

RECOVERY OPERATIONS

8-85. When a vehicle cannot be repaired within the allowable time or is damaged beyond repair, the troop trains recovers the vehicle to the UMCP, nearest MSR, or LRP based on SOP or the OPORD if the vehicle is repairable. The use of FBCB2 enables crews to accurately report the exact location of the inoperable vehicle, assuming that the vehicle still

has communications and system power. Otherwise, an accurate report must be given by the chain of command. The CRT will pull the vehicle to the UMCP or the field trains. When the decision is made to repair the vehicle at the BSA, the CTCP requests recovery support from the recovery section in the BSA. Equipment that cannot be repaired at the BSA support unit is normally evacuated and, if available, replaced with a float.

8-86. If a vehicle is a catastrophic kill, or not able to be recovered based on the threat situation, the commander may authorize the destruction of the vehicle. Before using thermite grenades to destroy a vehicle, remove as many valuable items as time permits, such as—

- Classified equipment and documents.
- Communications equipment.
- Weapons.
- Ammunition.

CONTROLLED EXCHANGE

8-87. Controlled exchange is the removal of serviceable parts from a non-mission capable (NMC) vehicle to install on a vehicle that can be more quickly or easily rendered mission capable. Due to the commonality of the vehicles throughout the brigade, the brigade commander has the authority to direct controlled exchanges, but will normally delegate the authority to the squadron commander, who further delegates to the XO or S4. Controlled exchanges must be closely monitored and tracked. Controlled exchange is performed on site or at the UMCP.

CANNIBALIZATION

8-88. Cannibalization is the authorized removal for reuse of parts or components from uneconomically repairable or disposable end items or assemblies. It is a supply source for authorized low mortality or difficult to obtain repair parts, components, and assemblies. It is a source for high priority items when delivery cannot be made by the required delivery date. It is performed in strict compliance with the SOP and in close coordination with maintenance support team personnel. The authorization process is the same as for controlled exchange, and it also must be closely monitored. Cannibalization is a major source of repair parts in a combat environment and should be aggressively used to keep the maximum number of combat systems operational.

COMMUNICATIONS SECURITY MAINTENANCE

8-89. COMSEC equipment is evacuated through normal Class VII channels to the signal company. All direct support maintenance is performed in the BSA.

FIELD SERVICES

8-90. GRREG is performed by the field services platoon from corps, located in the BSA. The initial collection, identification, safeguarding of personal effects, and evacuation of the dead is the troop's responsibility.

8-91. When remains are discovered, be careful to preserve all items that may be used for identification. If metal identification tags (dog tags) are on the remains, do not remove them. Secure all personal effects in a

bag or poncho and tie it to the remains. Place each casualty in a body bag, poncho, or shelter half and evacuate with the first available means of transportation, such as LOGPAC vehicles or disabled vehicles, to the squadron field trains. The supply sergeant receives all remains, and is responsible for turning them over to the GRREG collection point.

8-92. If the tactical and logistical situation makes evacuation impossible, emergency on-site burial is performed. On-site burial requires the permission of the squadron commander. If an on-site burial is performed, do the following:

- Complete two copies of DD Forms 551 and 1077 for each body. These forms are available through the squadron PAC. The 1SG and supply sergeant should carry them.
- If there are several remains, engineer support may be needed to dig trenches.
- Dig a trench 6-1/2 feet wide and 3-1/2 feet deep. The number of remains determines the length.
- Remove one identification tag from each body, and string the tags on a wire in the order in which the remains are buried.
- Place the remains in the grave shoulder to shoulder.
- Bury all personal effects with the remains.
- Mark the ends of each row with a stake. Tag each stake to identify the marker as a grave. Indicate the length of the grave.
- Prepare an overlay that shows the location of the gravesite.
- Cover the grave with earth removed from the trench.
- Forward the completed forms, overlay, and identification tags to squadron.

8-93. If the remains are contaminated, the gravesite must be clearly marked and separated from noncontaminated gravesites. This must also be indicated on the gravesite overlay.

SECTION IV – PERSONNEL SERVICE SUPPORT

PERSONNEL AND ADMINISTRATIVE

8-94. The squadron PAC in the field trains handles all troop administrative and personnel actions. The troop chain of command is responsible for ensuring that soldiers receive passes, leaves, promotions, awards, mail, legal assistance, financial services, and other personnel and welfare services on a fair and prompt basis. The 1SG interfaces with PAC daily through the supply sergeant, at the CTCP with the S1/S4, or at the LRP.

8-95. Casualties and missing personnel are reported on DA Forms 1155 and 1156. These forms are initiated by the individual who witnessed the incident and are forwarded to the 1SG. This action is the basis for notification of the next of kin and awarding benefits such as Serviceman's Group Life Insurance (SGLI), so accuracy is a must.

8-96. The commander should continuously manage the troop personnel situation to ensure trained personnel are manning key positions, crew

shortages are filled with available personnel, and replacement personnel are trained and incorporated into crews. During combat, platoon leaders and PSGs must balance their crews after casualties are evacuated. They must fill key positions on vehicles with the most qualified soldier. If necessary the commander may direct cross-leveling of personnel within the troop.

8-97. The troop submits daily personnel reports to the brigade/squadron as prescribed by SOP. The personnel reports are important because they allow the squadron commander to make tactical decisions for the employment of the troop. The reports also allow the S1, with the squadron commander's guidance, to properly distribute personnel replacements. The supply sergeant in the field trains receives replacement personnel. The sergeant in-processes the soldier into the troop, ensures he has the proper equipment, and then delivers him to the 1SG during the troop LOGPAC.

COMBAT HEALTH SUPPORT

FIRST AID

8-98. First aid is the responsibility of all soldiers; they use first aid, self-aid, buddy-aid, and combat lifesavers. All must be trained to take action after a soldier is wounded to keep him breathing, stop the bleeding, prevent shock, and dress the wound until medical personnel are available to treat the soldier. Training must include treatment of NBC casualties and crew evacuation drills to get soldiers out of a vehicle without creating further injury. Selected soldiers from each platoon will be trained in advanced medical skills in the combat lifesaver program.

TREATMENT

8-99. The 1SG should position troop medical aid and evacuation teams on the battlefield where they can be most responsive. They will usually operate under the control and direction of the 1SG in the troop combat trains. The medics must know the locations of and routes to each platoon, the troop combat trains, the squadron combat trains, and each casualty collection point (CCP).

EVACUATION

8-100. The BRT XO and 1SG must plan and coordinate with the BCT staff for CASEVAC requirements for BRT elements forward of the FEBA. The primary means available to the troop for CASEVAC is the use of scout HMMWVs or the 1SG's HMMWV. When the casualty is not urgent or priority, this method should suffice. When the casualty is urgent or priority the need for timely evacuation is a priority. The two methods available are ground evacuation with an ambulance secured by a combat element or aerial evacuation using a MEDEVAC aircraft or cargo aircraft.

8-101. Either method requires the troop XO and 1SG to conduct coordination and planning through the BCT staff to the supporting unit conducting the evacuation mission. The troop and BCT staff should have already planned for the need for this type of evacuation and have identified and tasked a specific unit to support the evacuation. The requirement then is to conduct final coordination between the BRT and

the supporting unit to facilitate a secure and timely linkup and evacuation.

8-102. For the recce troop of a cavalry squadron (RSTA) to receive medical assistance, a platoon leader or PSG calls the 1SG on the troop command net. The medic team monitors the call and goes to the platoon frequency to make any other necessary coordination. The platoon and the troop 1SG coordinate for linkup at the appropriate CCP. The 1SG and medic team (if attached) move to the reported location to treat the soldier(s). The 1SG coordinates for transport of wounded to an established AXP. If attached, medics transport as many wounded soldiers as possible in their armored ambulance. Do not transport the dead with the wounded; evacuate them separately. If the medics determine the soldiers are seriously wounded, they either transport them directly to the squadron combat trains, or coordinate to hand them over to squadron at a collection point. Soldiers with slight wounds should not be evacuated unless it is necessary. They should be treated and returned to duty. Secure the seriously wounded soldiers on their litters to prevent any further injury during the evacuation.

8-103. As a general rule, do not use combat vehicles to evacuate the wounded; this reduces combat strength. Use combat vehicles only if absolutely necessary, and no other transportation is available. Aerial evacuation, if it is available, is preferred because of its speed. The reconnaissance platoon coordinates with the troop then changes to the designated frequency to coordinate directly with the MEDEVAC or CASEVAC aircraft. They must pick a relatively flat, open, and covered and concealed position for the aircraft's LZ. The location should be given to the aircraft by radio and marked with colored smoke as the aircraft approaches the area. The reconnaissance platoon provides local security of the LZ until the evacuation is complete. Additionally, infiltration and exfiltration routes may be used to support CASEVAC operations.

8-104. Weapons and military equipment (except NBC protective equipment) of personnel being evacuated are secured with the PSG, 1SG, or supply sergeant. Ensure the soldier keeps his protective mask and overgarments. When the situation permits, all equipment that was secured by the 1SG or PSG is turned over to the supply sergeant.

8-105. Casualties are evacuated to the nearest aid station to the troop. This may be the squadron aid station located at the combat trains. It is possible that the troop may be working in the AO of one of the infantry battalions and should coordinate to evacuate to that battalion's aid station.

COMBAT STRESS CONTROL

8-106. The psychological effects of combat on soldiers influence their ability to execute their missions. Individual self-control and self-discipline in the face of danger are maintained through unit discipline and firm leadership. The commander and his subordinate leaders are key to the mental toughness of soldiers. Commanders should be visible to soldiers and share their hardships with them. They should talk to their soldiers individually and as a troop to keep them informed. The commander's tone of voice on the radio must indicate that he has the situation under control. He should transmit the successful accomplishments of the troop and tell the soldiers they are doing a good

job. Keep details about any casualties in the troop off the radio and ensure that soldiers who are KIA are covered up and kept out of view of the troop. The chaplain can be a great asset in maintaining troop morale. Do not neglect the mental fitness of soldiers, because uncontrolled fear is contagious and can quickly lead to chaos.

DISEASE AND NONBATTLE INJURIES

8-107. More soldiers are lost in combat to illness and disease than to combat-related wounds. Maintaining the health and fighting fitness of the troop is a leadership responsibility. Disease can quickly spread through the troop and incapacitate its soldiers. Watch for symptoms and ensure the soldiers' immunizations are current. Personal hygiene, field sanitation, and rest must be incorporated into all troop operations. If these are ignored, the combat effectiveness of the troop will decrease rapidly.

8-108. The personal hygiene of soldiers is a leader's responsibility. Rules of hygiene must be observed to ward off disease and improve troop morale. Ensure soldiers wash and change their socks and underwear daily, if possible. All soldiers should shower as time and resources are available. The senior medic plays a big part in personal hygiene by educating soldiers and by checking for signs of trench foot or immersion foot and frostbite.

8-109. Field sanitation is vital to the prevention of the spread of disease. The troop medics must assist in this effort by checking troop water supplies to ensure they are potable, and by ensuring mess utensils and equipment are properly cleaned. In static situations, such as when in assembly areas, soldiers will use slit trenches or latrines; at other times soldiers will use cat holes. Slit trenches and cat holes must be covered up after use to prevent the spread of disease.

8-110. Rest is extremely important for both commanders and their soldiers. When the troop is at REDCON 3 or 4, troop leadership should ensure a sleep plan is planned and executed.

UNIT MINISTRY TEAM

8-111. The unit ministry team (UMT), consisting of an appropriate number of chaplains and chaplain assistants, is assigned to provide unit, area, and denominational coverage to all troops in the cavalry squadron or units in a BCT. UMT provides the following eight subfunctions of worship opportunities:

- Administration of sacraments, rites, and ordinances.
- Pastoral care and counseling.
- Development and management of the UMT.
- Management of material resources.
- Advising the commander on matters of religion, morale, and morals as affected by religion.
- Ministry in support of soldiers suffering from battle fatigue.
- Development of programs that enhance the total well-being of the soldier.
- Development of activities to enhance unit cohesion.

SECTION V – ENEMY PRISONERS OF WAR

CAPTURE AND HANDLING

8-112. EPWs and maps, military documents, letters, and diaries obtained on the battlefield are valuable sources of combat intelligence. Reconnaissance platoons usually obtain information while searching the battlefield in the conduct of reconnaissance operations or after contact with the threat. They should rapidly report this information to the troop commander for evacuation instructions. The scouts may be ordered to take the documents to the troop CP or to rendezvous with the 1SG at a specific location to turn over the documents. Proper handling and evacuation of captured documents and equipment are important. The materials must be immediately turned over to trained intelligence personnel. In most cases, captured documents lose their value over time.

EVACUATION TECHNIQUES

8-113. In most situations, returning supply vehicles, aircraft, or troop headquarters vehicles can be used to evacuate EPWs from the troop combat trains to the squadron collection point. The troop is responsible for guarding EPWs until they are turned over to the S1. Wounded EPWs are treated through normal medical channels, but are kept separate from US soldiers.

8-114. When support vehicles are not readily available and the troop must continue its operation, secure the EPWs in a holding area such as a basement or compound. Notify the 1SG and the S1 of the EPW location and continue the mission. The 1SG will pick up the EPWs and complete their evacuation to the collection point.

Appendix A

Operation Order Guide

CONTENTS

Troop-leading Procedures A-1
Annotated OPORD Format A-2
FRAGO Format A-8
WARNO Format A-9
Reconnaissance Planning A-11
- Analyze the Situation A-11
- Identify Focus A-14
- Array Assets A-14
- Develop a Scheme of Maneuver A-15
- Integrate Support Assets and Command and Control A-16
- Conduct Reconnaissance A-16
- Complete the Plan/Finalize Scheme of Maneuver and Tasks A-17

Because of the inherently rapid tempo and fluid nature of reconnaissance operations, troop orders are seldom published as formal, written paper documents. In most cases the troop issues orders as verbal instructions using FM radio, or as more detailed FBCB2 messages and overlays. When the variables of METT-TC allow, the troop commander issues the order to subordinates as part of a detailed face-to-face briefing; however, mission requirements may not allow this. Regardless of how the order is issued, it is developed and implemented by applying the eight steps of the troop-leading procedures.

SECTION I – TROOP-LEADING PROCEDURES

A-1. The troop-leading procedures listed below, and discussed in detail in Chapter 2, are accomplished by the troop during planning, preparation, and execution of a mission. The troop commander receives assistance from key subordinates, such as XO and 1SG, as he applies the eight steps. For example, during the step "receive and analyze the mission," the XO may review the combat support and fire support sections of the higher headquarters order, while the 1SG examines CSS instructions, and the troop commander analyzes other portions of the order. This type of collaborative planning is most easily accomplished when troop leadership is collocated, but that may not be possible during normal troop operations. Use of FBCB2, particularly free text messages, facilitates remote collaboration when the troop applies the steps of the troop-leading procedures. The eight troop-leading procedures are:

- Receive and analyze the mission.
- Issue a WARNO.
- Make a tentative plan.
- Initiate movement.
- Conduct a reconnaissance.
- Complete the plan.

- Issue an order.
- Supervise and refine.

SECTION II – ANNOTATED OPERATION ORDER FORMAT

A-2. Doctrinal formats for an OPORD are described in FM 5-0 (FM 101-5). The annotated OPORD in Figure A-1 can be used by the troop commander and his subordinates when developing a troop OPORD. In some cases available planning time will limit the amount of detail contained in the order. Likewise, if the commander issues a FRAGO to adjust execution during an operation, it will also follow the OPORD format, but it will only contain the information and instructions required by the situation, i. e., some paragraphs will be omitted. FM 5-0 contains detailed information on developing the OPORD components listed in the figure that follows.

Copy _____ of _____ copies

Issuing headquarters

Place of issue

Date-time group of signature

Message reference number

OPERATIONS ORDER _____

References: Refer to higher headquarters OPLAN/OPORD, and identify map sheet for operation. (Optional)

Time Zone Used Throughout the Order: (Optional)

Task Organization: (Optional) (See paragraph 1c.)

1. **SITUATION.**

   a. **Enemy.**

      (1) Weather (note effects - include light data).

         (a) Light data.

         (b) Weather forecast for operation.

         (c) Effects of weather and light data on operations.

            1. Trafficability.

            2. Visibility.

            3. Effect on lasers/thermals.

            4. Effect on air operations.

Figure A-1. Example Troop OPORD

(2) Terrain.

(a) Obstacles, hills, valleys, road types and conditions, streams, rivers, bridges, and towns.

(b) Avenues of approach.

1. Size unit supported.
2. Start and end point.
3. Objective.

(c) Key terrain.

(d) Observation.

(e) Cover and concealment.

(f) Engagement areas.

(g) Effect of terrain on the operation.

(3) Enemy forces.

(a) Identification of enemy forces.

(b) Activity of enemy forces.

(c) Location of enemy units.

(d) Disposition of enemy forces.

(e) Strength of enemy forces.

(f) Composition of enemy forces, to include type of equipment.

(g) Other enemy information critical to the upcoming operation, to include the following:

1. Chemical and nuclear capabilities.
2. Air defense artillery (ADA).
3. Aviation, including helicopters.
4. Electronic warfare.

(h) Enemy courses of action (COAs).

(i) Probable enemy COA.

Figure A-1. Example Troop OPORD (continued)

b. **Friendly.**

(1) Mission of higher headquarters (squadron) and commander's intent.

(2) Mission of adjacent units (left, right, front, rear).

(3) Mission of other organic units in higher headquarters.

(4) Mission of reserves in higher headquarters.

(5) Mission of supporting units who are in direct support/reinforcing (DS/R) to higher headquarters (field artillery, engineer, and ADA).

(6) Which element from higher headquarters has priority of fires.

(7) Reinforcing units with a reinforcing/general support (R/GS) role to supporting units.

(8) Close air support (CAS) and number of sorties allocated to higher headquarters.

c. **Attachments and detachments to the troop.**

2. **MISSION.** The paragraph tells the *who, what, when, where,* and *why* for the troop. It states the essential task or tasks to be accomplished by the entire unit, to include on-order missions, and clearly defines the troop's objective.

3. **EXECUTION.**

Intent. The intent describes the commander's vision of what the troop must do to succeed with respect to the enemy, terrain, and desired end state. The commander's intent is a clear, concise statement that provides the link between the mission statement and the concept of the operation. Intent is normally expressed in four to five sentences, but can also be in bullet form. The intent describes the key tasks that are essential to the mission and the commander's desired end state for the mission. He may also identify the decisive point for the mission and explain a broader purpose for the operation in relation to his higher headquarters beyond that outlined in the mission statement. The intent also includes the conditions the troop meets to achieve the stated purpose (end state). The intent provides the basis for subordinates to exercise initiative when unanticipated opportunities arise or when the original concept of the operation no longer applies. Platoon leaders use the commander's intent as a basis for action when unanticipated opportunities arise. An example follows:

"Success is determining the disposition, composition, and location of the enemy defensive positions then determining the axis and point for the penetration of the enemy's defense in the troop AO. Key tasks are determining composition of obstacles at NAI 461, confirming the location of enemy AT weapons vicinity NAI 462, and conducting a reconnaissance of Route RED from Checkpoint 4 to Checkpoint 6. Our end state is the troop screening along Phase Line PHOENIX ready to pass elements of the Stryker Brigade Combat Team forward for their attack."

Figure A-1. Example Troop OPORD (continued)

a. **Concept of the operation.** This paragraph provides a clear and concise description of how the troop will accomplish its mission. It should include the troop commander's reconnaissance guidance (focus, reconnaissance tempo, and engagement criteria). For example:

"We will conduct a forward passage of lines, and perform zone reconnaissance in a troop vee with engineer platoon squads conducting a detailed route reconnaissance of Route Cherry behind the first and second platoons. The focus is locating enemy positions in the AO; the tempo is stealthy, and engagements with enemy elements will be avoided except for self-defense. Indirect fires will be used to provide immediate suppression."

(1) Maneuver. This section describes the details of how the concept will executed. For example:

"Troop crosses the LD at 0500 with 1st Plt on left (south), 2d Plt on right (north), mortars, engineers, and 3d Plt moving center of AO (troop vee). Troop CP moves to the rear of 3d Plt. Platoons reconnoiter AO abreast, establishing contact at designated troop internal and flank contact points. Bypass all built-up areas larger than 1 kilometer square not on Route Cherry. Upon contact with enemy main defensive belt, conduct dismounted patrols to ascertain enemy disposition, composition, orientation, and location of obstacles.

"Mortars cross the LD and establish MFP 10 following 3d Plt. Move from MFP 11 to MFP 12 through MFP 25 in sequence.

"Engineers conduct a detailed route reconnaissance of Route Cherry from SP to RP."

(2) Fires.

(a) Purpose for field artillery and mortar fires. (Describe how indirect fires will support the scheme of maneuver.)

(b) Preparation starting time, duration, and description of any fires landing in the AO.

(c) Allocation of final protective fires (FPF).

(d) Which element will have priority of fires.

(e) Number of priority targets allocated and who will control them.

(f) Special fires, restrictions, allocation/use of smoke, illumination, or CAS.

(g) Description of scheduled fires (offensive).

(h) Reference to fire support or target annexes.

(3) Intelligence, surveillance, and reconnaissance (ISR). The troop normally describes its reconnaissance actions under Paragraph 3a(1), Maneuver; however, when performing security or economy-of-force missions, the troop will describe its supporting ISR task here.

Figure A-1. Example Troop OPORD (continued)

(4) Obstacles, mines, and fortifications.

(a) Priority of engineer effort.

(b) Priority of engineer mission.

(c) Obstacle overlay.

(d) Obstacle list.

(e) Logistical constraints.

(f) On-order missions.

b. **Specific tasks to subordinate units.** For example:

"1st Plt observe NAI 875 from 071000 until 071500."

c. **Coordinating instructions.**

(1) Movement instructions.

(2) Time schedule of events.

(a) Rehearsal.

(b) Backbrief times.

(c) Precombat inspection time.

(d) First movement time.

(3) Passage of lines.

(a) Contact points.

(b) Passage points.

(c) Lanes and identification.

(4) Mission oriented protection posture (MOPP) level.

(5) Operational exposure guide (OEG).

(6) Actions on contact.

(7) Actions at danger areas.

(8) Priority intelligence requirements (PIR) and intelligence requirements (IR).

(9) Effective time of attachment or detachment.

(10) Rally points.

(11) Rules of engagement (ROE) and rules of interaction (ROI).

(12) Priority targets for direct-fire weapons.

(13) Uniform and equipment, to include weapons and ammunition.

(14) Air defense posture and weapons control status.

(15) Any instructions not provided in concept of the operation or specific instructions.

Figure A-1. Example Troop OPORD (continued)

4. **SERVICE SUPPORT**.

a. **General.**

(1) Organization of trains.

(a) Combat.

(b) Field.

(2) Location of trains (initial and subsequent).

(3) Movement of trains (movement instructions).

b. **Materiel and services.**

(1) Supply.

(a) Class I: Time and type.

(b) Class III: Time, location, and method.

(c) Class V: Time, amount, and type.

(d) Logistics package (LOGPAC) instructions (include squadron logistics release point [LRP]).

(2) Transportation. Location of main supply route.

(3) Services.

(a) Mortuary affairs.

(b) Clothing exchange and bath.

(c) Maintenance.

c. **Medical evacuation and treatment.**

(1) Location of supporting aid station.

(2) Displacement of aid station.

(3) Location of clearing station.

(4) Aero-medical evacuation information.

(5) Location of ambulance exchange points.

(6) Handling of contaminated wounded personnel.

d. **Personnel.**

(1) Prisoner of war (PW) handling and disposition instructions.

(2) PW guard instructions.

(3) Location of PW collection point.

(4) Instructions for interaction with local civilian populace (ROE).

(5) Number of expected replacements.

(6) Cross-leveling procedures.

e. **Miscellaneous.**

Figure A-1. Example Troop OPORD (continued)

5. **COMMAND AND SIGNAL.**

a. **Command.**

(1) Location of troop commander, troop/squadron CP.

(2) Succession of command.

b. **Signal.**

(1) Signal operating instructions (SOI) index and edition in effect.

(a) Key frequencies.

(b) Key call signs.

(c) Current item number identifier.

(2) FBCB2 situational awareness filter settings, unless specified in the troop SOP.

(3) KY-57 fill and change over.

(4) Current sign and countersign.

(5) Code words.

(6) Action if jamming or "hot mike" occurs.

(7) Pyrotechnics use.

(8) Periods and conditions of listening silence.

ACKNOWLEDGE: (Mandatory)

NAME (Commander's last name)

RANK (Commander's rank)

OFFICIAL: (Optional)

ANNEXES: (Optional)

DISTRIBUTION: (Optional)

Figure A-1. Example OPORD Format (continued)

SECTION III – FRAGMENTARY ORDER FORMAT

A-3. The troop uses FRAGOs to modify and change previously issued OPORDs. The FRAGO uses only those portions of the OPORD needed to change the existing troop plan. Paragraphs that are not modified by the FRAGO are marked "No Change." FRAGO use and format are described in FM 5-0 (FM 101-5). The troop commander may issue the FRAGO as an FM voice message, or as FBCB2 FRAGO or free text message. Figure A-2 shows how he might use a FRAGO to change an ongoing operation.

Copy _____ of _____ copies

Issuing headquarters

Place of issue

Date-time group of signature

Message reference number

FRAGMENTARY ORDER _____

References: Refer to higher headquarters OPLAN/OPORD, and identify map sheet for operation. (Optional)

Time Zone Used Throughout the Order: (Optional)

Task Organization: (Optional) (See paragraph 1c.)

1. SITUATION. (Mandatory) Include any changes to the existing order.

2. MISSION. (Mandatory) List the new mission.

3. EXECUTION.

Intent: (Optional)

a. Concept of the operation. (Mandatory)

b. Tasks to subordinate units. (Mandatory)

c. Coordinating instructions. (Mandatory) Include statement, "Current overlay remains in effect" or "See change 1 to Annex C, Operations Overlay." Mark changes to control measures on overlay or issue a new overlay.

4. SERVICE SUPPORT. Include any changes to existing order or the statement, "No change to OPORD XX."

5. COMMAND AND SIGNAL. Include any changes to existing order or the statement, "No change to OPORD XX."

ACKNOWLEDGE: (Mandatory)

NAME (Commander's last name)

RANK (Commander's rank)

OFFICIAL: (Optional)

ANNEXES: (Optional)

DISTRIBUTION:(Optional)

Figure A-2. Example FRAGO Format

SECTION IV – WARNING ORDER FORMAT

A-4. The troop commander uses a WARNO to alert subordinates that a new mission is being planned. WARNOs help subordinates plan quickly by providing details of the troop plan as they emerge. Depending on the time available, the troop may publish several WARNOs. The troop commander will normally publish the WARNO as an FM voice transmission, FBCB2 WARNO Message or FBCB2 free text message.

Like the FRAGO, the WARNO format is similar to the OPORD and a detailed description is in FM 5-0 [FM 101-5]. See Appendix for an example WARNO format.

NOTE: A WARNO does not authorize execution unless specifically stated.

Copy _____ of _____ copies

Issuing headquarters

Place of issue

Date-time group of signature

Message reference number

WARNING ORDER _____

References: Refer to higher headquarters OPLAN/OPORD, and identify map sheet for operation. (Optional)

Time Zone Used Throughout the Order: (Optional)

Task Organization: (Optional) (See paragraph 1c.)

1. SITUATION.

a. Enemy forces. Include significant changes in enemy composition, dispositions, and COAs. Information not available for inclusion in the initial WARNO can be included in subsequent WARNOs.

b. Friendly forces. (Optional) Only address if essential to the WARNO.

(1) Higher commander's mission.

(2) Higher commander's intent.

c. Attachments and detachments. Initial task organization. Only address major unit changes.

2. MISSION. Issuing headquarters mission at the time of the WARNO. This is nothing more than higher headquarters restated mission or commander's decisions during planning.

Figure A-3. Example WARNO Format

3. EXECUTION.

Intent:

a. Concept of operations. Provide as much information as available. This may be done during the initial WARNO.

b. Tasks to maneuver units. Any information on tasks to units for execution, movement to initiate, reconnaissance to initiate, or security to emplace.

c. Tasks to combat support units. See Paragraph 3b.

d. Coordinating instructions. Include any information available at the time of the issuance of the WARNO. It may include the following:

(1) Commander's critical information requirements (CCIR).

(2) Risk guidance.

(3) Deception guidance.

(4) Specific priorities, in order of completion.

ACKNOWLEDGE: (Mandatory)

NAME (Commander's last name)

RANK (Commander's rank)

OFFICIAL: (Optional)

ANNEXES: (Optional)

DISTRIBUTION: (Optional)

Figure A-3. Example WARNO Format (continued)

SECTION V – RECONNAISSANCE PLANNING

A-5. The troop faces unique challenges in applying the troop-leading procedures to reconnaissance operations. The following example shows how a troop commander might synchronize reconnaissance operations by applying the planning considerations listed for each reconnaissance mission in Chapter 3 of this manual.

ANALYZE THE SITUATION

A-6. The commander should begin planning as early as possible. His analysis includes identifying the troop tasks and the essential troop task and its purpose, which is the troop's mission. He also applies the commander's reconnaissance guidance (as a minimum, focus, tempo, and engagement criteria) that he received from higher headquarters as an OPORD, WARNO, or FRAGO. As part of his analysis, the commander identifies the AO and overlays the enemy situation, as described in the S2 SITEMP and higher headquarters operations graphics on this terrain (see Figures A-4 and A-5).

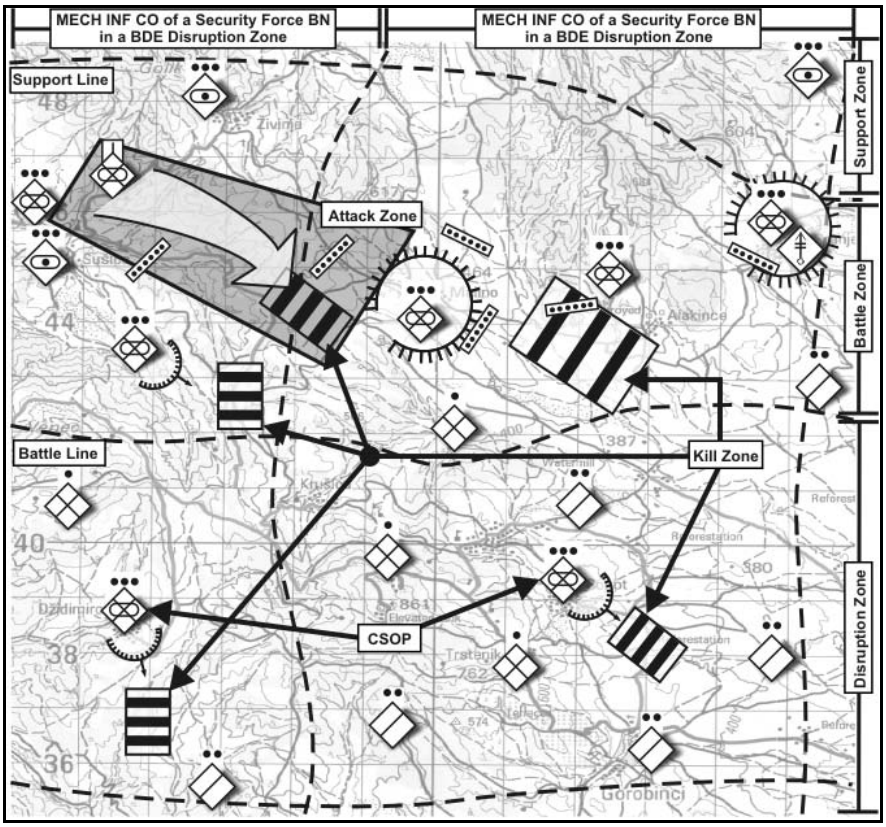

MECH INF CO of a Security Force BN in a BDE Disruption Zone
MECH INF CO of a Security Force BN in a BDE Disruption Zone
Support Line
Attack Zone
Support Zone
Battle Zone
Battle Line
Kill Zone
CSOP
Disruption Zone

Figure A-4. S2 Situation Template

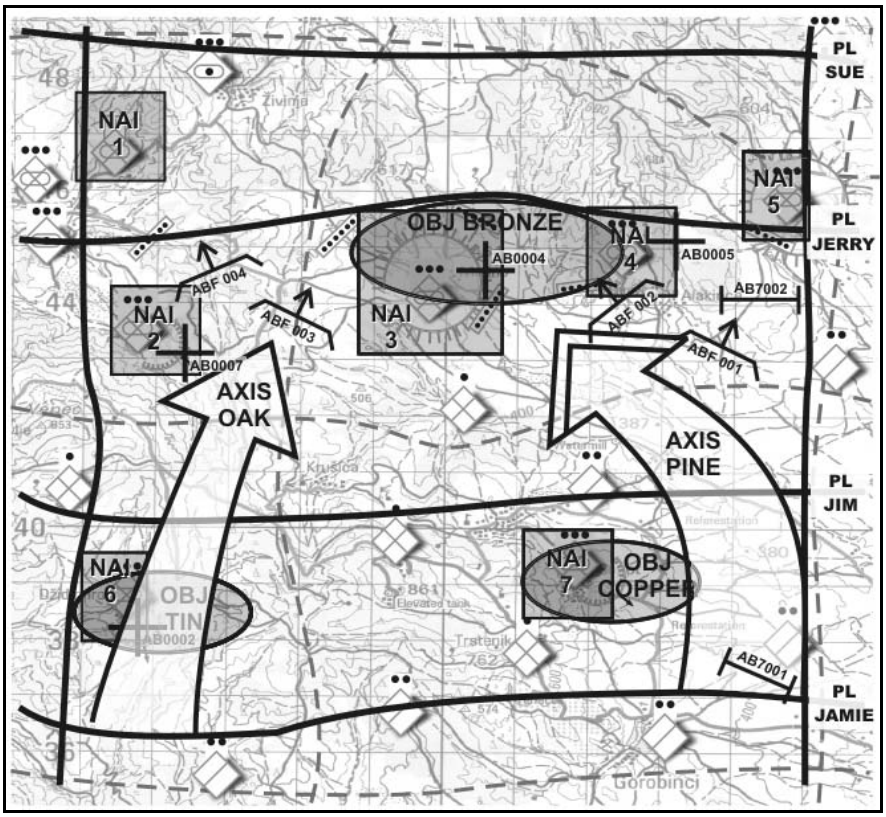


Figure A-5. Higher Headquarters Operations Graphics

A-7. Next the commander refines the enemy situation. This refinement begins with the consideration of the effects of terrain and weather as described by the modified combined obstacle overlay (MCOO), if available (see Figure A-6).

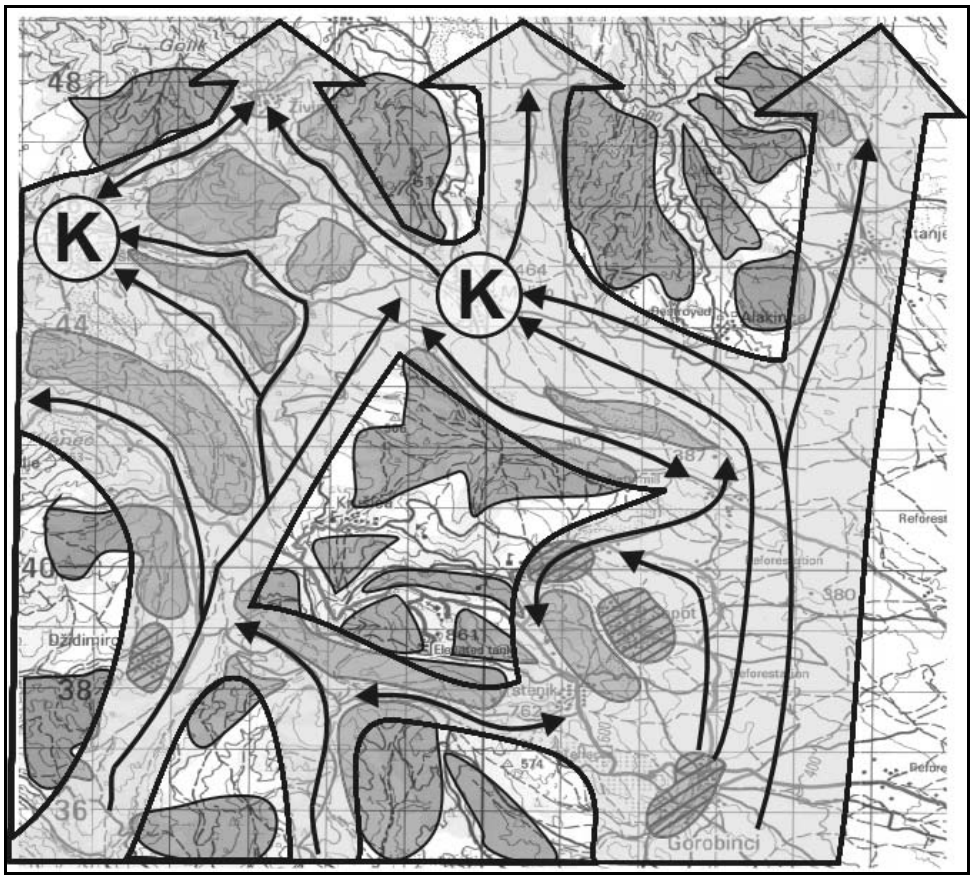


Figure A-6. Modified Combined Obstacle Overlay

A-8. Next, the commander uses his experience with the enemy's tactics, techniques and procedures to add detail to the SITEMP he received from higher headquarters. The refinement must provide as much clarity as possible while accounting for all capabilities of the enemy. The refined SITEMP (Figure A-7) will depict known and likely enemy forces down to vehicle or squad level, known and likely enemy obstacles, and must account for considerations of timing associated with enemy COAs. This refined SITEMP reflects how the commander envisions the enemy situation when the troop conducts its mission, and it drives the development of the troop's scheme of maneuver.

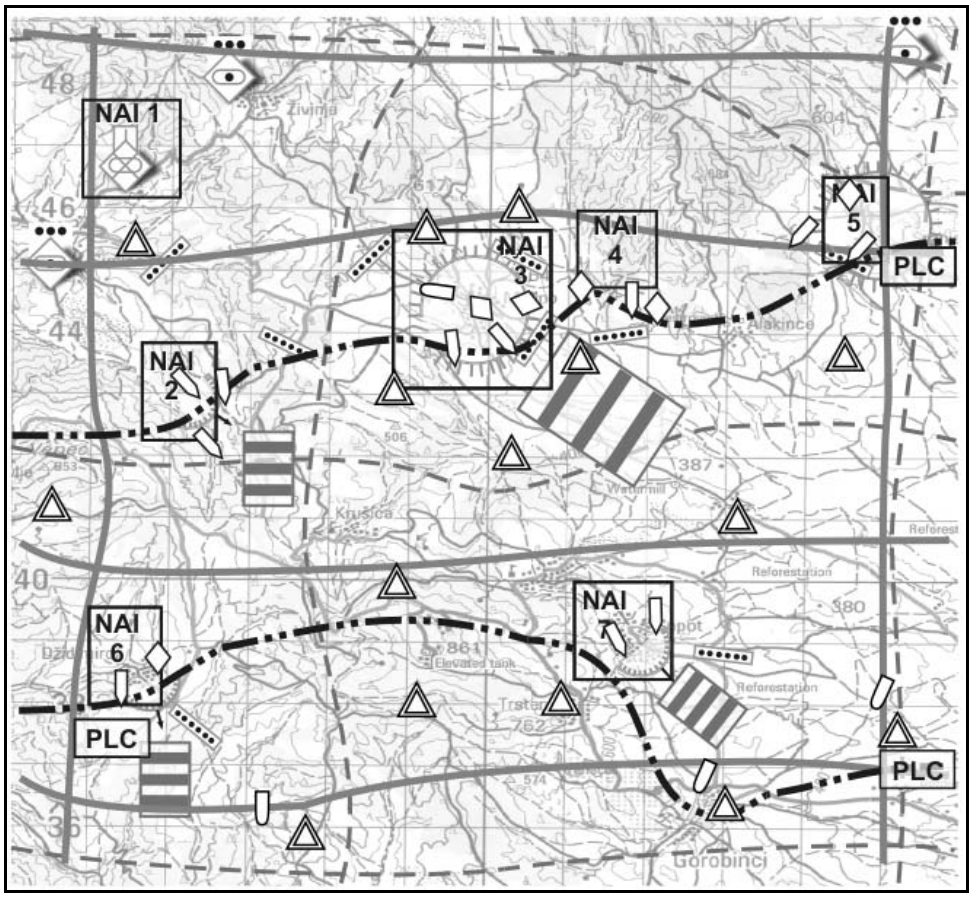


Figure A-7. Refined Situation Template

IDENTIFY FOCUS

A-9. Higher headquarters provides the troop specific ISR directions (R&S tasks) using OPORDs, FRAGOs, and WARNOs to focus the troop's operations. In most cases the focus established by the higher headquarters includes designating a reconnaissance objective, or objectives, that support planning for, or execution of, a specific scheme of maneuver or COA. Typically this focus is achieved through the use of assigning NAIs, or specifying an area(s) that must be reconnoitered. In some cases the focus might be a zone that must be reconnoitered. NAIs, areas, or zones will be tied to CCIR, targeting, or specific information requirements (SIR). Higher headquarters will also specify the tempo and engagement criteria necessary to support obtaining the information required for planning or execution.

NOTE: In stability operations and support operations missions, the focus may include or be directed at social or infrastructure-related objectives. The commander must still depict that environment graphically in order to better understand the dynamics between terrain, the focus of reconnaissance, and the friendly forces.

ARRAY ASSETS

A-10. Focus provides the commander detailed insight into what the troop must observe and report. Based on the troop assets available, the

refinement of the SITEMP, and the priority associated with each CCIR, the commander tentatively places assets to surveil or reconnoiter specified NAIs. If the troop is assigned an area or zone, the commander conducts further analysis of the area or zone to identify intelligence requirements and engagement criteria.

DEVELOP A SCHEME OF MANEUVER

A-11. The troop commander develops a scheme of maneuver using the MCOO, the refined SITEMP, reconnaissance guidance, and mission analysis to identify assets allocated to specific tasks. Typically, maneuver is accomplished by using stealth to avoid contact en route to the reconnaissance objective(s).

A-12. The commander begins maneuver planning by assigning subordinates and attached assets tasks that support the troop's mission and end state. Next, he designates OPs, objective rally points, release points, infiltration lane(s), vehicle dismount points, vehicle hide sites (if not using vehicles in the infiltration), and probable lines or points of contact. Displaying these graphically with the refined SITEMP, higher headquarters operations graphics, and the terrain (map) will provide the details of the troop's scheme of maneuver (see Figure A-8).

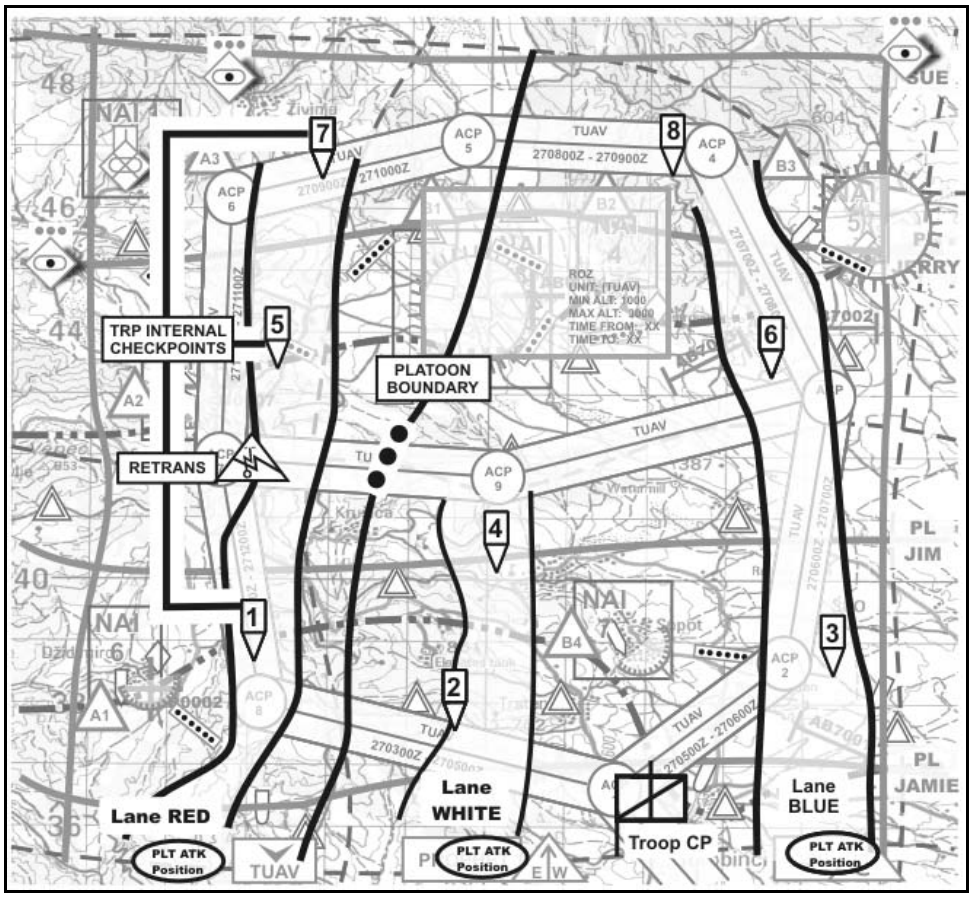


Figure A-8. Develop Troop Scheme of Maneuver

A-13. By using graphics to describe platoon-level actions, the commander is not eliminating the requirement of subordinate leaders to conduct their own analysis of mission, terrain, and threat forces. The purpose of these graphics is to focus subordinates on where and what the commander wants and integrate subordinate maneuver and support into the troop's scheme of maneuver and support. Graphics will continued to be refined as additional information concerning threat actions is received by the troop.

INTEGRATE SUPPORTING ASSETS AND COMMAND AND CONTROL

A-14. After developing the scheme of maneuver the commander determines what organic, attached, or higher assets are available to facilitate maneuver and support the troop by cueing troop elements (see Figure A-9). Considerations addressed by the troop commander include the following:

- How can UAVs, OH-58Ds, GSR, or SIGINT support identification and cueing of the troop's scouts?
- Does the troop echelon their reconnaissance infiltration into zone based on cueing from UAVs, GSR, and SIGINT, or do all troop elements move concurrently?
- How will communication support the maneuver of the troop?
- Where will the troop CP locate to support communication between the troop assets and with higher headquarters?
- Does the troop require signal support to communicate with higher headquarters?
- Is there a retrans line and how does it impact the troop's maneuver?
- How will CSS assets support the troop's maneuver? Do the graphics support casualty evacuation and resupply of platoons forward?

A-15. The commander, with assistance from the FSO, plans effects to support the troop's maneuver. If the troop has specific fire support tasks to accomplish, the commander and FSO plan how the troop will accomplish these tasks with the assets available. By identifying the probable line or points of contact, the commander and FSO can integrate effects into maneuver.

CONDUCT RECONNAISSANCE

A-16. Before the plan is finalized, the troop commander conducts reconnaissance to answer specific concerns or questions he identified in his mission analysis and development of the tentative plan. Time and other assets may create reconnaissance limitations; however, the commander can use organic and reach sources of reconnaissance as he refines and finalizes his plan. Examples include UAV capabilities, satellite images, and higher IPB products.

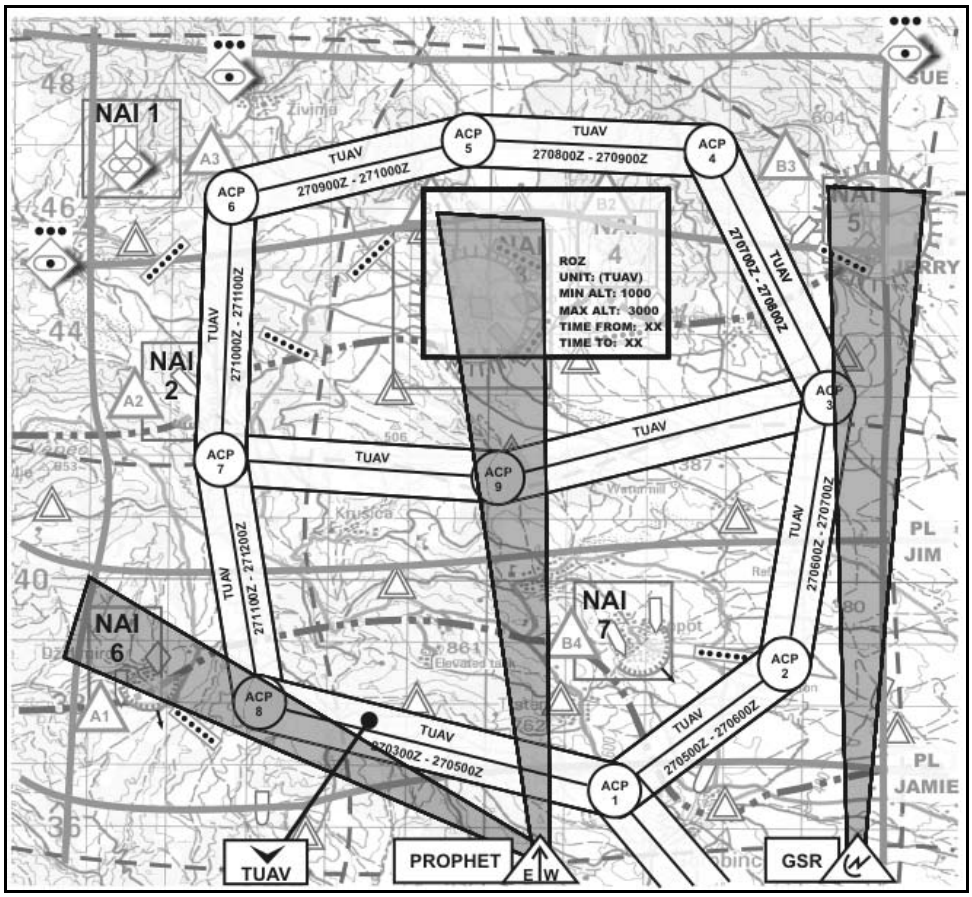


Figure A-9. Cueing Troop Elements

COMPLETE THE PLAN/FINALIZE SCHEME OF MANEUVER AND TASKS

A-17. The planning steps followed sequentially result in the following products:

- Refined troop SITEMP.
- Troop graphics.
- Concept of operations.
- Feasible scheme of maneuver, which includes cueing, mixing, and integrating.
- Nested tasks and purposes to subordinates.
- Specific reconnaissance guidance to the troop; guidance on actions on contact.
- Effects plan to support maneuver.
- C2 scheme of support to support maneuver.
- CSS plan to support maneuver.

A-18. The combined products may be reflected graphically (see Figure A-10).

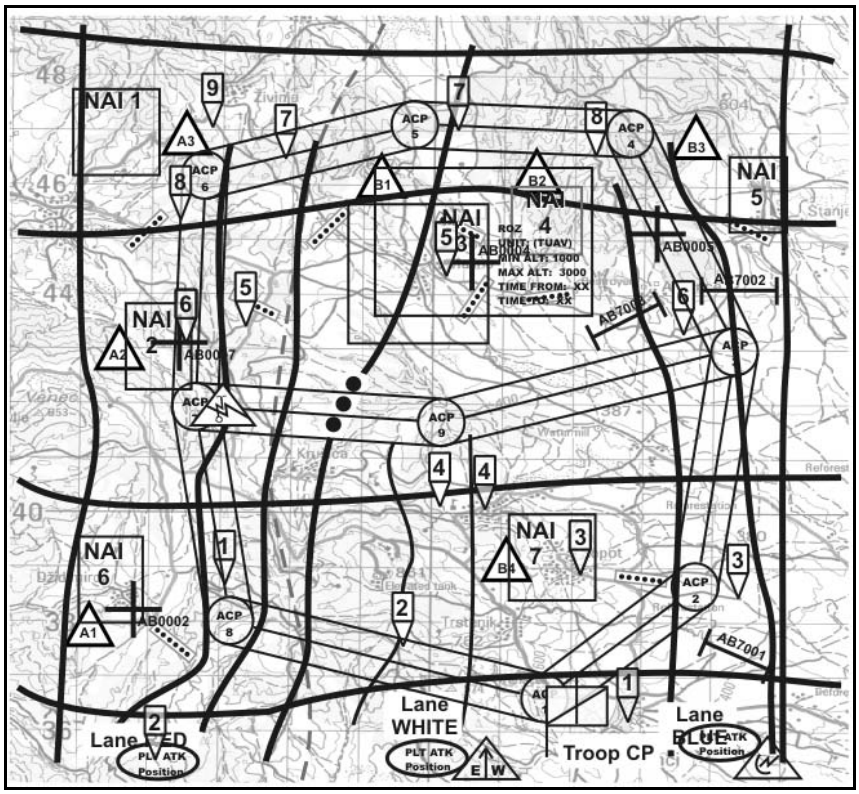


Figure A-10. Final Reconnaissance Planning Product

A-19. At this point, the troop commander should create, or finalize, a matrix for use as a tracking tool and decision aid. This matrix should show the relationship between assets, requirements, and time. These instructions apply to the example in Figure A-11:

- The first column shows the priority of each mission and depicts which ones are the commander's PIR.
- The next column provides the asset with the NAI number and grid coordinate.
- The instructions column explains to the assets exactly what they are looking for (target).
- The start/stop column provides times for the mission.
- The next set of columns lists the actual assets tasked to conduct each mission. An "X" placed under each asset identifies the tasking.
- The coordination column tells the assets which units to coordinate with for this mission.
- The last column provides the assets with reporting requirements.

A-20. These products support a feasible plan that is flexible enough to refine as new information is provided about the enemy situation, or during execution when contact is made. The plan includes planning for redundancy of observation and the ability to prioritize tasks and plan for retasking or reorienting based on chance contact or unexpected enemy actions. These types of events during execution may require a

reassessment of available assets to meet the commander's reconnaissance guidance, CCIR, or targeting tasks.

PURPOSE OR DECISION POINT							
COORDINATION INSTRUCTIONS							
1st PLT							
2nd PLT							
3rd PLT							
UAV							
GSR							
IREMBASS							
PROPHET							
ENG							
NBC Recon							
START/ STOP TIME							
INSTRUCTIONS (ANSWER THE FOLLOWING PIR/SIR)							
NAI							
PRIORITY							

Figure A-11. Reconnaissance Planning Tracking Tool/Decision Aid Matrix

Appendix B

Protection

CONTENTS

Risk Management B-1
Identify Hazards B-1
Assess Hazards to Determine Risks B-2
Develop Controls and Make Risk Decisions B-3
Implement Controls B-4
Supervise and Evaluate B-5
Fratricide B-6
Risk Identification and Preventive Measures B-7
Fratricide Risk Considerations (OPORD Format) B-10

Protection is the preservation of the troop's fighting potential. This appendix focuses on two aspects of protection: safety or risk management, and the avoidance of fratricide. Risk is the chance of injury or death for individuals and damage to or loss of vehicles and equipment. Risks, and/or the potential for risks, are always present in every combat and training situation the troop faces. Risk management must take place at all levels of the chain of command during each phase of every operation; it is an integral part of all tactical planning. The troop commander, platoon leadership, and all soldiers must know how to use risk management, coupled with fratricide reduction measures, to ensure that the mission is executed in the safest possible environment within mission constraints. For additional information on risk management, refer to FM 5-19 (FM 100-14).

SECTION I – RISK MANAGEMENT

B-1. There are five steps of risk management. Leaders must always remember that the effectiveness of the process depends on situational awareness. They should never approach risk management with "one size fits all" solutions to the hazards their unit will face. They must consider the essential tactical and operational factors that make each situation unique.

STEP 1 – IDENTIFY HAZARDS

B-2. A hazard is a source of danger. It is any existing or potential condition that could result in injury, illness, or death of personnel; damage to or loss of equipment and property; or some other form of mission degradation. Hazards arise in both tactical and training operations.

B-3. The leaders must identify the hazards associated with all aspects and phases of the mission, paying particular attention to the factors of METT-TC. Risk management must never be an afterthought; leaders must begin the process during the military decision-making process, or troop-leading procedures for troop and below, and continue it throughout the operation.

B-4. Figure B-1 lists possible sources of risk the troop might face during a typical tactical operation. The list is organized according to the factors of METT-TC.

SOURCES OF BATTLEFIELD RISK
MISSION • Duration of the operation. • Complexity/clarity of the plan. (Is the plan well developed and easily understood?) • Proximity and number of maneuvering units.
ENEMY • Knowledge of the threat situation. • Threat capabilities. • Availability of time and resources to conduct reconnaissance.
TERRAIN AND WEATHER • Visibility conditions, including light, dust, fog, and smoke. • Precipitation and its effect on mobility. • Extreme heat or cold. • Additional natural hazards (broken ground, steep inclines, water obstacles).
TROOPS AND SUPPORT AVAILABLE • Equipment status. • Morale. • Experience the units conducting the operation have working together. • Soldier/leader proficiency. • Soldier/leader rest situation. • Degree of acclimatization to environment. • Impact of new leaders and/or crewmembers.
TIME AVAILABLE • Time available for planning and rehearsals. • Time available to conduct the mission.
CIVIL CONSIDERATIONS • Applicable rules of engagement and/or rules of interaction. • Potential stability and/or support operations involving contact with civilians (such as noncombatant evacuation operations, refugee or disaster assistance, or counterterrorism). • Potential for media contact/inquiries.

Figure B-1. Examples of Potential Hazards

STEP 2 – ASSESS HAZARDS TO DETERMINE RISKS

B-5. Hazard assessment is the process of determining the direct impact of each hazard on an operation (in the form of hazardous incidents). Use the following steps:

- Determine which hazards can be eliminated or avoided.
- Assess each hazard that cannot be eliminated or avoided to determine the probability that the hazard can occur.
- Assess the severity of hazards that cannot be eliminated or avoided. Severity, defined as the result or outcome of a hazardous incident, is expressed by the degree of injury or illness (including death), loss of or damage to equipment or property, environmental damage, or other mission-impairing

factors (such as unfavorable publicity or loss of combat power).

- Taking into account both the probability and severity of a hazard, determine the associated risk level (extremely high, high, moderate, and low). Table B-1 summarizes the four risk levels.
- Based on the factors of hazard assessment (probability, severity, and risk level, as well as the operational factors unique to the situation), complete the risk management worksheet. Figure B-2 shows an example of a risk management worksheet.

Table B-1. Risk Levels and Impact on Mission Execution

RISK LEVEL	MISSION EFFECTS
Extremely high (E)	Mission failure if hazardous incidents occur in execution.
High (H)	Significantly degraded mission capabilities in terms of required mission standards. Not accomplishing all parts of the mission or not completing the mission to standard (if hazards occur during mission).
Moderate (M)	Expected degraded mission capabilities in terms of required mission standards. Reduced mission capability (if hazards occur during the mission).
Low (L)	Expected losses have little or no impact on mission success.

STEP 3 – DEVELOP CONTROLS AND MAKE RISK DECISIONS

DEVELOPING CONTROLS

B-6. After assessing each hazard, develop one or more controls that will either eliminate the hazard or reduce the risk (probability and/or severity) of potential hazardous incidents. When developing controls, consider the reason for the hazard, not just the hazard by itself.

MAKING RISK DECISIONS

B-7. A key element in the process of making a risk decision is determining whether accepting the risk is justified or, conversely, is unnecessary. The decision-maker must compare and balance the risk against mission expectations, then decides if the controls are sufficient and acceptable and whether to accept the resulting residual risk. If the risk is determined unnecessary, the decision-maker directs the development of additional controls or alternative controls; as another option, he can modify, change, or reject the selected COA for the operation.

1. Organization and Unit Location:							2. Page	1	of	3
3. Mission/Task: Swim Site Set-up				4. Begin Date: 000103		5. End Date: 000104		6. Date Prepared: 991201		
7. Operational Phase in which the Mission/Task will be conducted:										
8. Prepared by: (Name/Rank/Duty Position)										
9. Identify Hazards	10. Assess the Hazards & Determine Initial Risk Level					11. Develop Controls & Make Decisions (Specific measures taken to reduce the probability and severity of a hazard)	12. Determine Residual Risk Level					13. Implement Controls (Include SOPs, References, OPORD, etc.)	14. Supervise and Evaluate (Continuous, Leader Checks, Buddy System, AAR, etc.)
(Be Specific)	L	M	H	E		(Be Specific)	L	M	H	E		(Be Specific)	(Be Specific)
1. Collision between vehicles during troop Movement to swim site.		X				1a. Safety brief-covering route, march speed, catch up speed, intervals, use of seat belts 1b. Drivers properly licensed to operate their vehicle 1c. Route reconned to reduce chance of accidents 1d. Vehicle dispatched to ensure it goes through QA/QC and is IAW –10 1e. Winter driver's course conducted focusing on safe operation of vehicle in a winter environment 1f. Vehicles prepared for winter driving conditions: chains, heaters functional, tires, spot checked with depth gauge	X					1a. Safety brief conducted at 0600 prior to SP on 000104 & 000105 1b. Licenses checked during PCI on 991229 1c. Route reviewed during safety brief 1d. Vehicle dispatch checked during PCI 1e. 991220 winter drivers course conducted for mission personnel by SSG Poe 1f. Vehicle 5988 and mechanical soundness verified during PCI on 991229	1a. Safety brief verified by COC upon completion 1b. Licenses verified as valid by COC @ conclusion of PCI 1c. Strip map and route verified and reconed by COC prior to 991229 1d. Dispatches valid, verified by COC @ completion of PCI 1e. Verification by COC upon completion of course on 991220 1f. Verification conducted by COC @ conclusion of PCI
15. Remaining Risk Level After Countermeasures Are Implemented: ➔ (CIRCLE HIGHEST REMAINING RISK LEVEL)					LOW					MEDIUM	HIGH		EXTREMELY HIGH
16. RISK DECISION AUTHORITY: (Approval Authority Signature Block)													

Figure B-2. Example Risk Management Worksheet

STEP 4 – IMPLEMENT CONTROLS

B-8. Controls are the procedures and considerations used to eliminate hazards or reduce their risk. Implementing controls, the most important part of the risk management process, is the chain of command's contribution to the unit's safety. Implementing controls includes

coordination and communication with appropriate superior, adjacent, and subordinate units and with individuals executing the mission. The troop commander must ensure that specific controls are integrated into operations plans (OPLAN), OPORDs, SOPs, and rehearsals. The critical check for this step is to ensure that controls are converted into clear, simple execution orders understood by all levels.

B-9. If the leaders have conducted a thoughtful risk assessment, the controls will be easy to implement, enforce, and follow. Examples of risk management controls include the following:

- Thoroughly brief all aspects of the mission, including related hazards and controls, and ensure that subordinates know the plan.
- Allow adequate time for rehearsals at all levels.
- Drink plenty of water, eat well, and get as much sleep as possible (at least 4 hours in a 24-hour period).
- Enforce speed limits, use of seat belts, and driver safety.
- Establish recognizable visual signals and markers to distinguish maneuvering units.
- Enforce the use of ground guides in assembly areas and on dangerous terrain.
- Limit single-vehicle movement.
- Establish SOPs for the integration of new personnel.

STEP 5 – SUPERVISE AND EVALUATE

B-10. During mission execution, it is imperative for leaders to ensure that risk management controls are properly understood and executed. Leaders must continuously evaluate the unit's effectiveness in managing risks to gain insight into areas that need improvement.

SUPERVISION

B-11. Leadership and unit discipline are the keys to ensuring that effective risk management controls are implemented. All leaders are responsible for supervising mission rehearsals and execution to ensure standards and controls are enforced. In particular, NCOs must enforce established safety policies as well as controls developed for a specific operation or task. Techniques include spot checks, inspections, SITREPs, confirmation briefs, and supervision.

B-12. During mission execution, leaders must continuously monitor risk management controls to determine whether they are effective and to modify them as necessary. Leaders must also anticipate, identify, and assess new hazards. They ensure that imminent danger issues are addressed on the spot and that ongoing planning and execution reflect changes in hazard conditions.

EVALUATION

B-13. Whenever possible, the risk management process should also include an after-action review (AAR) to assess unit performance in identifying risks and preventing hazardous situations. Leaders should

then incorporate lessons learned from the process into unit SOPs and plans for future missions.

B-14. The troop commander gives the platoon leaders and NCOs direction, sets priorities, and establishes the command climate (values, attitudes, and beliefs). Successful preservation of combat power requires him to imbed risk management into individual behavior. To fulfill this commitment, the commander must exercise creative leadership, innovative planning, and careful management. Most important, he must demonstrate support for the risk management process. The commander and others in the chain of command can establish a command climate favorable to risk management integration by taking the following actions:

- Demonstrate consistent and sustained risk management behavior through leading by example and by stressing active participation throughout the risk management process.
- Provide adequate resources for risk management. Every leader is responsible for obtaining the assets necessary to mitigate risk and for providing them to subordinate leaders.
- Understand their own and their soldier's limitations, as well as their unit's capabilities.
- Allow subordinates to make mistakes and learn from them.
- Prevent a "zero defects" mindset from creeping into the unit's culture.
- Demonstrate full confidence in subordinates' mastery of their trade and their ability to execute a chosen COA.
- Keep subordinates informed.
- Listen to subordinates.

B-15. For the commander, his subordinate leaders, and individual soldiers alike, responsibilities in managing risk include the following:

- Make informed risk decisions; establish and then clearly communicate risk decision criteria and guidance.
- Establish clear, feasible risk management policies and goals.
- Train the risk management process. Ensure that subordinates understand the *who, what, when, where,* and *why* of managing risk and how these factors apply to their situation and assigned responsibilities.
- Accurately evaluate the unit's effectiveness as well as subordinates' execution of risk controls during the mission.
- Inform higher headquarters when risk levels exceed established limits.

SECTION II – FRATRICIDE

B-16. Fratricide is broadly defined as the employment of friendly weapons and munitions with the intent to kill the threat or destroy his equipment or facilities, but the action results in the unforeseen and unintentional death or injury to friendly personnel. Fratricide is

avoidable; leader actions coupled with current resources (such as the FBCB2) can greatly reduce the risk of fratricide.

B-17. The modern battlefield is more lethal than any in history. The tempo of operations is rapid, and the nonlinear nature of the battlefield creates command and control challenges for all unit leaders. The accuracy and lethality of modern weapons make it possible to engage and destroy targets at these extended acquisition ranges. At the same time, however, the ability of US forces to acquire targets using thermal imagery and other sophisticated sighting systems exceeds their ability to accurately identify these targets as friend or foe. As a result, friendly elements can be engaged unintentionally and destroyed in a matter of seconds.

B-18. Battlefield obscuration adds to the problem, which becomes a critical consideration whenever thermal sights are the primary source of target identification. Rain, dust, fog, smoke, and snow degrade identification capability by reducing the intensity and clarity of thermal images.

B-19. On the battlefield, positive visual identification cannot be the sole engagement criteria at ranges beyond 1,000 meters. Situational awareness is the key; it must be maintained throughout an operation.

RISK IDENTIFICATION AND PREVENTIVE MEASURES

B-20. Reduction of fratricide risk begins during the planning phase of an operation and continues throughout preparation and execution. Risk identification must be conducted at all levels during each phase, and the results clearly communicated throughout the chain of command so risk assessment can begin. This section covers considerations that influence risk identification; it also focuses on measures leaders can implement to make the identification process more effective and to help prevent friendly fire incidents from occurring.

PLANNING PHASE

B-21. A plan that is thoroughly developed and understood helps to minimize fratricide risk. The following considerations help indicate the potential for fratricide in a given operation:

- The clarity of the threat situation.
- The clarity of the friendly situation.
- The clarity of the commander's intent.
- The complexity of the operation.
- The planning time available at each level.

B-22. Graphics are a basic tool that commanders at all levels use to clarify their intent, add precision to their concept, and communicate their plan to subordinates. As such, graphics can be a very useful tool in reducing the risk of fratricide. Leaders at all levels must understand the definitions and purpose of operational graphics and the techniques of their employment.

NOTE: See FM 1-02 (FM 101-5-1) for the definitions of each type of graphic control measure.

PREPARATION PHASE

B-23. The following are some indicators that may identify potential fratricide risks:

- Rehearsals not conducted to standard, or not done at all.
- Low training or proficiency levels of units and individuals.
- No habitual relationships between units conducting the operation.
- Weakened physical readiness (endurance) of the troops conducting the operation.

B-24. Backbriefs and rehearsals are primary tools in identifying and reducing fratricide risk during the preparation phase. The following are some considerations for their use:

- Backbriefs ensure subordinates understand the commander's intent. They often highlight areas of confusion, complexity, or planning errors.
- The type of rehearsal conducted determines what types of risks are identified.
- Rehearsals should extend to all levels of command and involve all key players.

EXECUTION PHASE

B-25. During execution, in-stride risk assessment and reaction are necessary to overcome unforeseen fratricide risk situations. The following are factors to consider when assessing fratricide risks:

- Intervisibility between adjacent units.
- The level of cross-talk between units.
- Amount of battlefield obscuration.
- Ability or inability to positively identify targets.
- Similarities and differences in equipment, vehicles, and uniforms among friendly and threat forces.
- Vehicle density on the battlefield.
- The tempo of the battle.

B-26. Maintaining situational awareness at all levels and at all times is another key to fratricide reduction as an operation progresses. Units must develop and employ effective techniques and SOPs to aid leaders and crewmen in this process. These techniques include—

- Monitoring on the next higher net.
- Radio cross-talk between units.
- Accurate position reporting and navigation.
- Training and use/exchange of LNOs.

B-27. The following measures for reducing fratricide risk are not directive in nature, nor are they intended to restrict initiative. Apply them as appropriate based on the specific situation and METT-TC factors. Risk reduction guidelines are the following:

- Identify and assess potential fratricide risks in the estimate of the situation. Express these risks in the OPORD or FRAGO.
- Maintain situational awareness, focusing on such areas as current intelligence; unit locations and dispositions; denial areas (minefields/family of scatterable mines [FASCAM]); contaminated areas, such as improved conventional munitions (ICM) and NBC; SITREPs; and METT-TC factors.
- Ensure positive target identification. Review vehicle/weapon identification cards. Know at what ranges and under what conditions positive identification of friendly vehicles/weapons is possible.
- Establish a command climate that stresses fratricide prevention. Enforce fratricide prevention measures, emphasize the use of doctrinally sound tactics, techniques, and procedures. Ensure constant supervision in the execution of orders and the performance of all tasks and missions to standard.
- Recognize the signs of battlefield stress. Maintain unit cohesion by taking quick, effective action to alleviate it.
- Conduct individual, leader, and collective (unit) training covering fratricide awareness, target identification and recognition, and fire discipline.
- Develop a simple, decisive plan.
- Give complete and concise mission orders.
- Use SOPs that are consistent with doctrine to simplify mission orders. Periodically review and change SOPs as needed.
- Strive for maximum planning time for you and your subordinates.
- Use common language/vocabulary and doctrinally correct standard terminology and control measures, such as fire support coordination line, zone of engagement, and restrictive fire lines.
- Ensure thorough coordination is conducted.
- Plan for and establish effective communications (to include visual).
- Plan for collocation of command posts whenever it is appropriate to the mission, such as during a passage of lines.
- Designate and employ LNOs as appropriate.
- Ensure rules of engagement are clear.
- Include fratricide risk as a key factor in terrain analysis (observation and fields of fire, cover and concealment, obstacles, key terrain, and avenues of approach, [OCOKA]).

- Conduct rehearsals whenever the situation allows time to do so.
- Be in the right place at the right time. Use position location/navigation devices (GPS and POSNAV); know your location and the locations of adjacent (left, right, leading, and follow-on) units (FBCB2 as an enabler); and synchronize tactical movement.
- Plan and brief operations security, especially when utilizing dismounted operations (challenge/password, sign/countersign).
- Include discussion of fratricide incidents in after-action reviews.

FATRICIDE RISK CONSIDERATIONS (OPORD FORMAT)

B-28. Figure B-3, which uses the OPORD format, contains key factors and considerations in fratricide reduction. This is not intended to be used as an OPORD preparation guide; rather, it should be used as a checklist during OPORD development to ensure fratricide reduction measures are considered and included in the order. The factors and considerations may warrant inclusion in additional paragraphs than those listed in this format.

1. SITUATION.

a. Threat forces.

(1) Are there similarities among threat and friendly equipment and uniforms that could lead to fratricide?

(2) What languages do threat forces speak? Could these contribute to fratricide risk?

(3) What are the threat's deception capabilities and his past record of deception activities?

(4) Do you know the locations of threat forces?

b. Friendly forces.

(1) Among the allied forces, are there differences (or similarities with threat forces) in language, uniform, and equipment that could increase fratricide risk during combined operations?

(2) Could differences in equipment and uniforms among US armed forces increase fratricide risk during joint operations?

(3) What differences in equipment and uniforms can be stressed to help prevent fratricide?

(4) What is the friendly deception plan?

(5) What are the locations of your unit and adjacent units (left, right, leading, follow-on)?

(6) What are the locations of neutrals and noncombatants?

Figure B-3. Example OPORD Format with Fratricide Reduction Measures

c. Own forces.

(1) What is the status of training activities? What are the levels of individual, crew, and unit proficiency?

(2) Will fatigue be a factor for friendly forces during the operation? Has an effective sleep plan been developed?

(3) Are friendly forces acclimatized to the area of operations (AO)?

(4) What is the age (new, old, or mix) and condition of equipment in friendly units? What is the status of new equipment training?

(5) What are the expected MOPP requirements for the operation?

d. Attachments and detachments.

(1) Do attached elements understand pertinent information regarding threat and friendly forces?

(2) Are detached elements supplied this pertinent information by their gaining units?

e. Weather.

(1) What are the expected visibility conditions (light data and precipitation) for the operation?

(2) What effect will heat and cold have on soldiers, weapons, and equipment?

f. Terrain.

(1) Do you know the topography and vegetation (such as urban, mountainous, hilly, rolling, flat, desert, swamp/marsh, prairie/steppe, jungle, dense forest, open woods) of the expected AO?

(2) Have you evaluated the terrain using the factors of OCOKA?

2. MISSION. Are the mission and all associated tasks and purposes clearly understood?

3. EXECUTION.

a. Task organization.

(1) Has the unit worked under this task organization before?

(2) Are SOPs compatible with the task organization (especially with attached units)?

(3) Are special markings or signals (for example, cats' eyes, chemlites, or panels) needed for positive identification of uniforms and equipment?

(4) What special weapons and/or equipment will be used? Do they look or sound like threat weapons and/or equipment?

b. Concept of the operation.

(1) Maneuver. Are main and supporting efforts identified to ensure awareness of fratricide risks and prevention measures?

Figure B-3. Example OPORD Format with Fratricide Reduction Measures (continued)

(2) Fires (direct and indirect).

(a) Are priorities of fires identified?

(b) Have target lists been developed?

(c) Has the fire execution matrix/overlay been developed?

(d) Have locations of denial areas (minefields, FASCAM) and contaminated areas (ICM, NBC) been identified?

(e) Are the locations of all supporting fire targets identified in the OPORD/OPLAN overlays?

(f) Are aviation and close air support targets clearly identified? Have signals been established to positively identify these targets for the aircraft? Have airspace coordination areas been developed? Have threat air defense systems been suppressed?

(g) Has the direct-fire plan been developed and synchronized with the fire support plan?

(h) Have final protective fires been designated?

(i) Have sector limitsbeen identified and verified?

(j) Have executors for each target been assigned and do they understand when and where to shoot? Do the shooters have "eyes on" the target?

(k) Are the observers surveyed in or are they using a map grid? Target location errors can cause problems.

(l) Do all leaders and executors understand where the fire support coordination measures are and when they go into effect? Rehearsal is the key.

(m) Can the fire support officer hear what targets are being called on the maneuver nets?

(n) Have all targets been rehearsed with the executors and the field artillery battalion?

(o) Does the reinforcing or general support reinforcing field artillery have all the proper graphics and understand where they fit in? Did they attend the rehearsal?

(p) Have restrictions on specific munitions been established and does everyone know where they are planned and emplaced?

(3) Engineer tasks.

(a) Are friendly minefields, including FASCAM and ICM dud-contaminated areas, known?

(b) Are obstacles identified, along with the approximate time needed for reduction/breaching of each?

(4) Tasks to each subordinate unit. Are friendly forces identified, as appropriate, for each subordinate maneuver element?

(5) Tasks to CS/ CSS units. Have locations of friendly forces been reported to CS/CSS units?

Figure B-3. Example OPORD Format with Fratricide Reduction Measures (continued)

(6) Coordinating instructions.

(a) Will rehearsals be conducted? Are they necessary? Are direct and indirect fires included?

(b) Is a backbrief necessary?

(c) Are appropriate control measures clearly explained and illustrated in the OPORD and overlays? Have they been disseminated to everyone who has a need to know? What is the plan for using these control measures to synchronize the battle and prevent fratricide?

(d) Have target/vehicle identification drills been practiced?

(e) Do subordinate units know the immediate action, drill, or signal for "CEASE FIRE" or "I AM FRIENDLY" if they come under unknown or friendly fire? Is there a backup action?

(f) Is guidance in handling dud munitions, such as ICM and cluster bomb units, included?

4. SERVICE SUPPORT.

a. Are trains locations and identification markings known by everyone?

b. Do medical and maintenance personnel know the routes between train units?

5. COMMAND AND SIGNAL.

a. Command.

(1) What are the locations of the commander and key staff members?

(2) What is the chain of command and the succession of command?

b. Signal.

(1) Do instructions include backup code words and visual signals for all special and emergency events?

(2) Do instructions cover how to identify friendly forces to aircraft?

(3) Are SOI distributed to all units with a need to know, such as higher, lower, adjacent, leading, and follow-on elements?

Figure B-3. Example OPORD Format with Fratricide Reduction Measures (continued)

Appendix C

Nuclear, Biological, and Chemical Operations

Because many potential adversaries have the capability to employ biological, chemical, and nuclear weapons, scouts must prepare to fight in an NBC environment. Collecting, processing, and disseminating needed NBC hazard information is also vital. To survive and remain effective on the integrated battlefield, the troop must be proficient in the three principles of NBC defense: contamination avoidance, NBC protection, and decontamination.

CONTENTS

Contamination Avoidance C-1
Defense Before a Nuclear Attack C-2
Biological Defense C-2
Defense Before a Chemical Attack C-3
NBC Protection C-3
MOPP Levels, Alarms, and Signals C-3
Defense During a Nuclear Attack C-5
Defense After a Nuclear Attack C-5
Defense During and After a Chemical Attack C-6
Symptoms and Treatment of NBC Casualties C-7
Marking Contamination C-8
Marking Procedures C-8
Unmasking Procedures C-9
Warning and Reporting Systems C-10
Decontamination C-11
Immediate Decontamination C-11
Operational Decontamination C-12
Thorough Decontamination C-12
R&S in an NBC Environment C-13
Toxic Industrial Material Hazards C-14

Additional-duty NBC personnel should be designated by the troop SOP for operations in an NBC environment. The crews of the section leaders' vehicles should be designated and trained as chemical agent detection and radiological survey and monitoring teams. Crews should be designated as decontamination teams and trained to operate all decontamination equipment organic to the brigade or squadron.

NOTE: See FM 3-20.98 [FM 17-98] for more detailed information on NBC procedures and equipment.

SECTION I – CONTAMINATION AVOIDANCE

C-1. Avoidance is the most important principle of NBC defense. The best way to survive an NBC attack is to avoid being the object of one. Avoiding contaminated areas minimizes the risk of additional casualties and the degradation of combat power caused by operating in MOPP level 3 or 4 for extended periods of time. In addition, the unit is not required to spend the time and resources needed for decontamination. Contamination avoidance include using passive avoidance measures, locating contaminated areas, identifying NBC agents, warning other members of the troop as well as other units, and reporting NBC threats to higher headquarters. If the tactical situation does not allow avoidance, the troop must be prepared to operate in a contaminated environment.

C-2. Passive avoidance measures can decrease the possibility of NBC attack or reduce the effects of an attack already under way. Effective use of concealment, dispersion, prepared positions, OPSEC, and signal security lessen the chances of being acquired as a target. The reconnaissance troop should continually analyze its vulnerability to NBC attack and take appropriate protective measures.

C-3. Attacks and contamination must be detected quickly and reported to adjacent units and headquarters elements. The troop must have an effective method of quickly passing the alarm in the event of an NBC attack. The alarm can be passed by radio, audible signals, hand-and-arm signals, or via the FBCB2, if available, to update the COP. The SOP should specify automatic procedures for employing detection teams and submitting the required NBC reports after an NBC attack or when contamination is encountered.

C-4. All movement routes and future positions should be reconnoitered for nuclear and chemical contamination whenever possible. Reconnaissance and quartering parties should be prepared to encounter, detect, identify, report, and mark contamination. By finding the location and type of hazard (nuclear radiation or chemical agent), the troop can determine the best plan for bypassing, crossing, or operating in the hazard. The troop must be prepared to locate and evaluate the hazard based on available information from fallout predictions (simplified and detailed), chemical downwind hazard predictions, monitoring data, and contamination overlays. Based on the situation, the troop commander must be able to implement protective measures specified in the SOP to minimize personnel losses and limit the spread of contamination.

DEFENSE BEFORE A NUCLEAR ATTACK

C-5. The best defense against a nuclear attack is to dig in. Unit defensive positions, which vary from individual foxholes to improved positions, should be prepared whenever the tactical situation permits.

C-6. Scouts should keep their individual weapons, equipment, clothing, and other issue items in their vehicles. The blast wave will convert unsecured items into lethal missiles. Supplies, explosives, and flammable materials should be dispersed and protected.

C-7. Reverse slopes of hills and mountains give some nuclear protection. The initial radiation and the heat and light from the fireball of a nuclear blast tend to be absorbed by hills and mountains. Use of gullies, ravines, ditches, natural depressions, fallen trees, and caves can reduce nuclear casualties.

BIOLOGICAL DEFENSE

C-8. The key protective measure against a biological attack is maintaining a high order of health, personal hygiene, and sanitation discipline. Biological attacks are hard to detect. If an attack occurs, chances of survival are better if crewmembers are healthy and physically fit and maintain good personal hygiene. Keeping the body clean helps to prevent ingestion of biological agents. Keep small cuts or scratches covered and germ-free by using soap, water, and first-aid measures. Since insects carry biological agents, prevent insect bites by keeping clothes buttoned and covering the skin.

C-9. After an attack, assume that all surfaces have been exposed to germs. Eat or drink only food that has remained sealed; consume it only after you have washed and cleaned the outside of the container. All water must be boiled at least 15 minutes.

DEFENSE BEFORE A CHEMICAL ATTACK

PROTECTIVE PROCEDURES

C-10. Ensure all personnel have their protective masks available, and make sure each mask fits and functions properly. All personnel should wear the proper protective clothing in accordance with the MOPP level designated by the commander. Protect all equipment and supplies from liquid chemical contamination by keeping them organized and covered.

EMPLACING THE M22 OR THE M8A1 AUTOMATIC CHEMICAL AGENT ALARM

C-11. In the troop, the M22 or the M8A1 automatic chemical agent alarm (ACADA) is the primary means of detecting an upwind chemical attack. Either system provides two essential elements of survival: detection of a toxic agent cloud or vapor and early warning to troops in the monitored position. The M22 ACADA, the newer piece of equipment, detects and identifies, by class, all nerve agents, mustard, and lewisite. The M8A1 only detects dangerous concentrations of G and V type nerve agent vapors. The troop leader decides where to place the chemical alarm. Both the M22 and the M8A1 are placed in the same manner, no more than 150 meters from the troop's perimeter or position. The available detector units are spaced approximately 300 meters apart and connected to the alarm unit by telephone cable (WD-1). Positioning the alarm units near radiotelephone assets makes it easy to alert the unit of an attack. Blowing sand or dust, rain, sleet, snow, cold temperatures, tropical conditions, and other chemical interferents, such as petroleum products, can possibly affect operation of the alarms.

SECTION II – NUCLEAR, BIOLOGICAL, AND CHEMICAL PROTECTION

C-12. If an NBC hazard cannot be avoided, the troop must be prepared to protect personnel and equipment from the effects of exposure. The type and degree of protection required will be based on the unit's mission and the hazard. Note that the line between contamination avoidance and protection is not distinct; many actions contribute equally to both.

MOPP LEVELS, ALARMS, AND SIGNALS

C-13. Soldiers on the integrated battlefield will face a combination of NBC and conventional attacks. The key to effective protection in an NBC environment is the troop's proficiency in automatically and correctly implementing an effective NBC defense SOP. Individual and unit protection against chemical attack or contamination hinges on effective use of the MOPP and on individual proficiency in basic NBC skills. All soldiers in the troop must be familiar with the standard MOPP levels shown in Table C-1.

C-14. When an NBC attack is recognized, every soldier must receive the warning and assume the appropriate MOPP level (see Table C-1). Those in immediate danger need warnings they can see or hear. The alarm or

signal must be simple and unmistakable for quick and correct reaction. Troop elements not immediately affected need the information to prepare for the hazard or to change plans.

C-15. If an NBC hazard has been located, the contaminated area should be marked. The NBC warning and reporting system (NBCWRS) and contamination markers contribute to the warning procedures for follow-on forces. In the immediate area of contamination, several methods (or a combination of methods) will allow quick reaction by all soldiers. These methods include vocal alarms (shout of "GAS"), the M8A1 alarm, nonvocal alarms (horn blast or banging of metal-to-metal objects), and visual alarms (most commonly, hand-and-arm signals). The tactical situation may not allow for audible alarms; therefore, the troop SOP should clearly detail the visual signals for contamination. The FBCB2 is another method that provides NBC hazard situational awareness.

Table C-1. MOPP Levels and Equipment Requirements

MOPP Level / Equipment	MOPP READY	MOPP 0 (ZERO)	MOPP 1	MOPP 2	MOPP 3	MOPP 4	Command (Mask Only)
Mask	Carried	Carried	Carried	Carried	Worn[1]	Worn	Worn
Overgarment	Ready[2]	Available[3]	Worn[1]	Worn[1]	Worn[1]	Worn	
Vinyl Overboots	Ready[2]	Available[3]	Available[3]	Worn	Worn	Worn	
Gloves	Ready[2]	Available[3]	Available[3]	Available[3]	Available[3]	Worn	
Helmet Protective Cover	Ready[2]	Available[3]	Available[3]	Worn	Worn	Worn	
Chemical Protective Undergarment	Ready[2]	Available[3]	Worn[4]	Worn[4]	Worn[4]	Worn[4]	

[1]In hot weather, coat or hood can be left open for ventilation.
[2]These items must be available to the soldier within two hours, with a second set available within six hours.
[3]These items must be positioned within arm's reach of the soldier.
[4]The chemical protective undergarment is worn under the BDU (this primarily applied to armor vehicle crewmen and special purpose forces).

DEFENSE DURING A NUCLEAR ATTACK

DISMOUNTED DEFENSIVE ACTIONS

C-16. Never run for cover! Immediately drop flat on the ground (face down) or to the bottom of a foxhole, with head toward the blast. Keep your helmet on and cover exposed skin as much as possible. Close your eyes. Remain down until the blast wave has passed and debris has stopped falling. Stay calm, check for injury, check weapons and equipment for damage, and prepare to continue the mission.

MOUNTED DEFENSIVE ACTIONS

C-17. As time permits, mounted scouts take the following actions:

- Position the vehicle with the front slope facing the blast and the main weapon system pointed away from the blast.
- Lock the brakes.
- Secure loose equipment inside the vehicle to prevent injuries and equipment damage.
- Secure all exterior components that could be damaged by the blast (such as water cans, duffel bags, and antennas) inside the vehicle.
- Turn off all radios as well as turret and master power.
- Close and lock all hatches, including ballistic shields.
- Wear the proper helmet and eye protection.

DEFENSE AFTER A NUCLEAR ATTACK

C-18. Once the attack ends, forward an NBC-1 nuclear report, organize the survivors, secure and organize equipment, repair and reinforce the BP, assist casualties, improve protection against possible fallout, and begin continuous monitoring. If the radiation dose rate reaches a hazardous level after fallout is complete, be prepared to move, on order, to a less hazardous area.

FALLOUT WARNING

C-19. The first person to detect the arrival of fallout is usually the radiological monitor operating a radiacmeter. As soon as he notes a dose rate of 1 centigray per hour (cGy/hr) or higher, he warns unit personnel. All personnel hearing the warning relay it to others. If the mission allows, soldiers should move into a shelter with overhead cover and stay there until given an "ALL CLEAR" signal or until otherwise directed to move. If the mission does not allow the unit to take cover, decontamination becomes more important and perhaps more difficult.

SUPERVISION OF RADIOLOGICAL MONITORING

C-20. Radiological monitoring is performed routinely to determine the presence and intensity of a radiation hazard. It is conducted using the IM-174 or AN/VDR-2 radiacmeter. Soldiers must be properly trained on this equipment. There are two types of monitoring: periodic and continuous.

C-21. Periodic monitoring assures the troop that the area is not contaminated or, if applicable, provides a warning when contamination is

detected after the troop arrives. Readings are taken once every hour. Periodic monitoring is initiated under the following conditions:

- After first use of nuclear weapons in theater.
- When the troop is out of contact with higher headquarters.
- When ordered by higher headquarters.
- When the troop stops continuous monitoring.

C-22. Continuous monitoring is the surveillance for radiation in the troop's area or position. (AO). Continuous monitoring will be initiated when any of the following situations occur:

- When a nuclear detonation is observed or reported in the AO.
- When an NBC-3 report is received and the troop is in the predicted area of contamination.
- When ordered by higher headquarters.
- When a dose rate of 1 cGy/hr is recorded in periodic monitoring.

SUPERVISION OF TACTICAL DOSIMETRY OPERATIONS

C-23. Check all dosimeters to be used for the operation; any that do not read zero should be turned in for recharging. If a charger is not available, note the original reading. Make sure dosimeter readings are reported accurately. Collect readings at least once daily. Average these readings, round to the nearest 10, and report this average and the radiation exposure status (RES) to higher headquarters.

C-24. When operating in or crossing radiologically contaminated areas, use the individual actions for nuclear defense. Vehicles should be closed tightly; cargoes should be covered by tarps or tenting. Mission permitting, speed should be kept down to prevent dust, and vehicles should maintain adequate following distances to stay out of the dust raised by preceding vehicles.

C-25. After the unit exits a contaminated area, personnel, equipment, and cargo should be checked for contamination and decontaminated, if necessary. Dose rates should be monitored closely to ensure compliance with operational exposure guidance (OEG). The RES should be updated, if appropriate.

DEFENSE DURING AND AFTER A CHEMICAL ATTACK

C-26. During a chemical attack, give the alarm and have all unmasked soldiers put on their protective masks and other MOPP gear. All personnel should move inside their vehicles and close all hatches (if applicable); this will aid in the protection from gross liquid contamination. Use M256A1 chemical agent detector kits to determine the type of agent for vapor hazards or the M8 paper that comes with the kit to detect liquid V and G nerve agents, or H-type blister agents. Submit an NBC-1 report. Continue the mission based on the commander's guidance.

C-27. After a chemical attack, forward an NBC-1 chemical report, treat casualties, perform immediate decontamination as required, and mark the contaminated area.

SECTION III – SYMPTOMS AND TREATMENT OF NUCLEAR, BIOLOGICAL, AND CHEMICAL CASUALTIES

C-28. Potential adversaries may have access to a wide variety of biological and chemical agents on the modern battlefield. These agents can be dispensed alone or with other carriers or agents. Casualties resulting from exposure to biological or chemical agents require medical treatment as quickly as possible.

C-29. The first step in the treatment process is usually appropriate self-aid and buddy-aid measures. These vary depending on the agent. Soldiers should first mask to prevent them from either inhaling or ingesting additional agents; then they should remove agents from exposed skin, either by washing with soap and water or by using the M291 kit. Soldiers use buddy-aid procedures to observe each other for early symptoms of toxic exposure and to request medical assistance.

C-30. The troop commander should select separate casualty collection points for both contaminated and noncontaminated casualties to prevent cross-contamination. The 1SG should rehearse movement to and from these sites in MOPP 4. Additionally the commander should designate vehicles to be used in a dirty casualty evacuation. All contaminated casualties should be decontaminated as thoroughly as the situation allows before being evacuated. The troop must include in its casualty evacuation request the number of contaminated patients; this will allow the evacuation team to send the proper number of vehicles for pickup.

C-31. Chemical agents fall into four major categories: nerve, blister, blood, and choking. Their primary routes of attack on the body are through the respiratory system and the skin. These agents are especially dangerous because they can kill or incapacitate quickly. The first, and most important, step in dealing with them effectively is to recognize symptoms so proper treatment can be administered. Table C-2 lists protection and detection measures, symptoms, and treatment and decontamination procedures for chemical agents.

Table C-2. Chemical Agent Protection Procedures

Agent Type	Nerve	Blister	Blood	Choking
Protection	Protective mask and suit	Protective mask and suit	Protective mask	Protective mask
Detection	M22 ACADA, M8A1, M256A1, chemical agent monitor (CAM) or improved chemical agent monitor (ICAM), M8 paper	M22 ACADA, M256A1, M8 paper, CAM/ICAM	M256A1	Odor only (resembles new-mown hay or green corn)
Symptoms	Difficult breathing, drooling, nausea, vomiting, convulsions, blurred vision	Burning eyes, stinging skin, irritated nose (no symptoms with mustard or nitrogen mustard)	Convulsions and coma	Coughing, choking, nausea, headache, tightness in chest
Effects	Incapacitates	Blisters skin and damages respiratory tract	Incapacitates	Floods and damages lungs
First aid	Mark 1 nerve agent antidote kit (NAAK); convulsive antidote, nerve agent (CANA)	Same as for second- and third-degree burns	NONE	Avoid movement and keep warm
Decontamination	Use M291 kit on skin and flush eyes with water; use M295 IEDK to decontaminate individual equipment	Use M291 kit on skin and flush eyes with water; use M295 IEDK to decontaminate individual equipment	NONE	NONE

SECTION IV – MARKING CONTAMINATION

C-32. Contamination must be marked so unsuspecting personnel will not be exposed to it. When troop detection, monitoring, or reconnaissance teams detect or suspect NBC hazards, they mark all likely entry points into the area and report the contamination to higher headquarters.

C-33. The only exception to this policy occurs when marking the area would help the threat. If the commander makes this exception, the hazard must still be reported to protect friendly units.

MARKING PROCEDURES

C-34. Markers should always face away from the contamination. For example, if markers are placed on the edge of a contaminated area to mark a radiological hot spot, they face away from the point of the highest contamination reading. Markers are placed at roads, trails, and other likely points of entry. When time and mission permit, additional markers should be emplaced. The distance between signs varies. In open terrain, they can be placed farther apart than in hilly or wooded areas. Soldiers should be able to stand in front of a marker and see the markers to the left and right of it.

C-35. Units discovering a marked contaminated area do not have to conduct elaborate, time-consuming surveys. The new unit checks the extent of contamination and alters its plans, if necessary. If the size of the hazard has either expanded or decreased, they relocate the signs. If the hazard is gone, they remove the signs. Changes are reported to higher headquarters.

C-36. US forces use standard NATO markers to make it easier for allies to recognize the hazards (see Figure C-1). These markers are in the standard NBC marking set. Colors and inscriptions on a marker indicate the type of hazard. Other contamination information is written on the front of the sign.

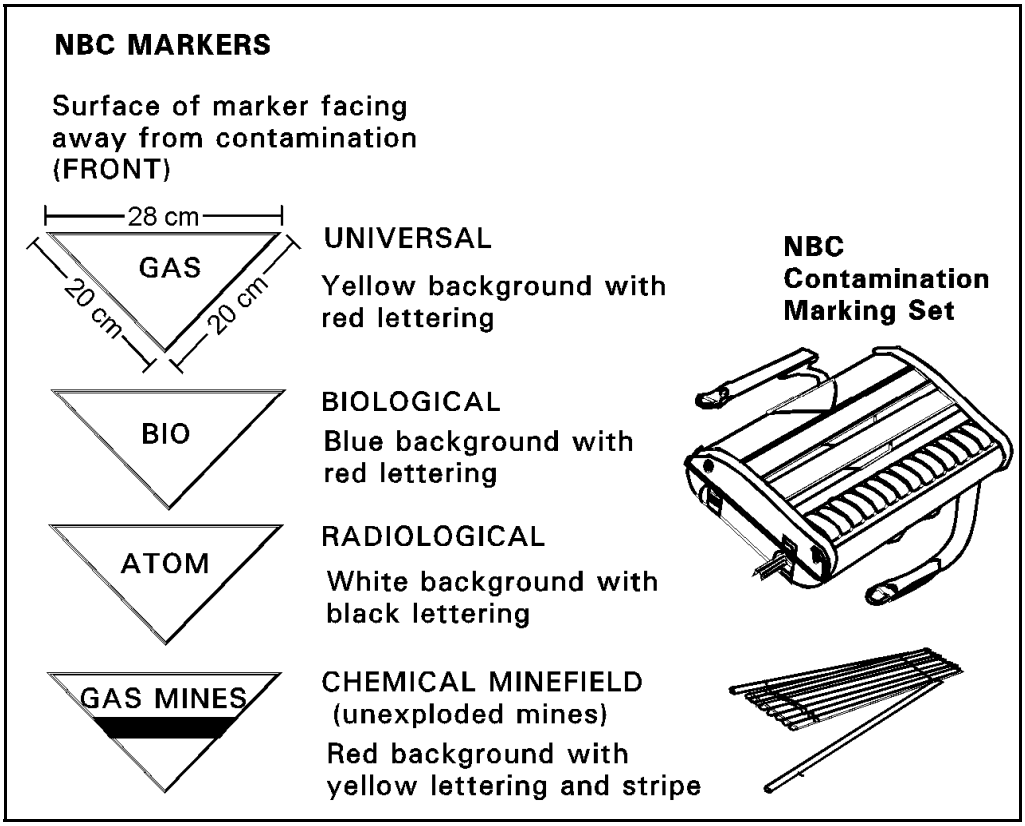


Figure C-1. NBC Marking Devices

UNMASKING PROCEDURES

C-37. Soldiers should unmask as soon as possible except when a biological or chemical attack is expected. Use the procedures outlined in the following paragraphs to determine if unmasking is safe.

C-38. If an M256/M256A1 detector kit is available, use it to supplement unmasking procedures. The kit does not detect all agents; therefore, proper unmasking procedures, which take approximately 15 minutes, must still be used. If all tests with the kit (including a check for liquid

contamination using M8 detector paper) have been performed and the results are negative, use the following procedures:

- The senior person should select one or two soldiers to start the unmasking procedures. If possible, they move to a shady place; bright, direct sunlight can cause pupils in the eyes to constrict, giving a false symptom.
- The selected soldiers unmask for 5 minutes, then clear and reseal their masks.
- Observe the soldiers for 10 minutes. If no symptoms appear, request permission from higher headquarters to signal "ALL CLEAR."
- Watch all soldiers for possible delayed symptoms. Always have first-aid treatment immediately available in case it is needed.

C-39. If an M256/M256A1 kit is not available, the unmasking procedures take approximately 35 minutes. When a reasonable amount of time has passed after the attack, find a shady area; use M8 paper to check the area for possible liquid contamination. Conduct unmasking using these procedures:

- The senior person selects one or two soldiers. They take a deep breath and break their mask seals, keeping their eyes wide open.
- After 15 seconds, the soldiers clear and reseal their masks. Observe them for 10 minutes.
- If no symptoms appear, the same soldiers break the seals, take two or three breaths, and clear and reseal their masks. Observe them for 10 minutes.
- If no symptoms appear, the same soldiers unmask for 5 minutes, then remask.
- If no symptoms appear in 10 minutes, request permission from higher headquarters to signal "ALL CLEAR." Continue to observe all soldiers in case delayed symptoms develop.

C-40. The all-clear signal is given by word of mouth through the chain of command. It is initiated by higher headquarters after testing for contamination proves negative. If required, standard sound signals may be used, such as a continuous, sustained blast on a siren, vehicle horn, or similar device. When "ALL CLEAR" is announced on the radio, it must be authenticated before compliance. The commander designates the specific all-clear signal and includes it in his SOP.

WARNING AND REPORTING SYSTEMS

C-41. The NBCWRS is a rapid means of sending reports of an NBC attack. The reports inform other affected units of clean areas and possible contamination. They are also used to report contaminated areas up and down the chain of command and to adjacent units. Each report has a specific purpose and uses standard codes to shorten and simplify the reporting process. Refer to FM 3-11.3 [FM(M) 3-3] for the formats and letter codes of standard NBC reports. The scout troop's priority should be to pass detailed information, in the form of SPOTREPs, to the

battalion/squadron chemical officer or NBC NCO. The troop NBC NCO should then send the proper NBC report to higher headquarters.

SECTION V – DECONTAMINATION

C-42. Since continued operation in the presence of nuclear or chemical contamination will cause casualties and severe combat degradation, decontamination is essential. To get the maximum benefit of the time and resources available, the troop should conduct decontamination using the following decontamination principles:

- Conduct it as soon as possible.
- Conduct it only to the extent necessary to ensure safety and operational readiness.
- Conduct it as far forward as possible.
- Conduct it by priority.

C-43. These principles are consistent with doctrine that places the burden of decontamination at battalion or troop level. For this reason, the troop must use all of the available decontamination assets to maximum benefit and develop a thorough SOP covering decontamination methods and priorities. Refer to FM 3-11.5 (FM 3-5) for more detailed information on NBC decontamination.

IMMEDIATE DECONTAMINATION

C-44. Immediate decontamination is a basic soldier survival skill carried out by soldiers as soon as possible after they discover they are contaminated. Its basic purposes are to minimize casualties, save lives, and limit the further spread of contamination. Any contact between chemical or biological agents and bare skin should be treated as an emergency. Some agents can kill if they remain on the skin for longer than a minute. The best technique for removing or neutralizing these agents is to use the M291 skin decontamination kit. Leaders must ensure that their soldiers are trained to execute this technique automatically, without waiting for orders. Skin decontamination is a soldier's basic survival skill and should be performed within one minute of being contaminated.

C-45. Personal wipedown should begin within 15 minutes of contamination. The wipedown removes or neutralizes contamination on the hood, mask, gloves, and personal weapon. For chemical and biological contamination, soldiers use mitts from the M295 individual equipment decontamination kit (IEDK). For radiological contamination, they wipe off the contamination with a cloth or simply brush or shake it away.

C-46. Operator's spraydown of equipment should begin immediately after completion of personal wipedown. The spraydown removes or neutralizes contamination on the surfaces operators must touch frequently to perform their mission. For chemical and biological contamination, operators can use on-board decontamination apparatuses, such as the M11/M13, or the newly fielded M100 sorbent

decontamination system (SDS). Use the M295 IEDK to decontaminate surfaces to which decontaminating solution 2 (DS2) cannot be applied, or if the M100 SDS is not available.

NOTE: DS2 must be washed off surfaces no more than 30 minutes after application. If necessary, use 5-gallon water cans or other water sources to assist in removing DS2. For radiological contamination, they brush or scrape away the contamination with whatever is at hand or flush it with water and wipe it away.

NOTE: M100 SDS replaces the M11's and M13's currently employed in operator spraydown operations associated with immediate decontamination. It is not approved for use on skin. The system uses powdered sorbent to remove chemical agents from surfaces. The SDS is designed to operate at temperatures between -25 degrees and 120 degrees Fahrenheit.

OPERATIONAL DECONTAMINATION

C-47. Operational decontamination allows a force to continue fighting and sustain its mission after being contaminated. It limits the hazard of transferring contamination by removing most of the gross contamination on equipment and nearly all the contamination on soldiers. This speeds the weathering process and allows clean areas (people, equipment, and terrain) to stay clean. Following operational decontamination, soldiers who have removed sources of vapor contamination from their clothing and equipment can use hazard-free areas to unmask temporarily to eat, drink, and rest.

C-48. Operational decontamination is accomplished using assets of the parent unit. It makes use of two decontamination techniques: vehicle washdown and MOPP gear exchange. These procedures are conducted at the same time and are best performed at squad level. Vehicles and personnel that are not contaminated should not go through either process.

C-49. Vehicle washdown, conducted as far forward as possible, is performed by the task force power-driven decontamination equipment (PDDE) crew with assistance from the squad decontamination crew. It is most effective if started within 1 hour after contamination. There are two steps in vehicle washdown:

- Step 1. Button up the vehicle and secure equipment.
- Step 2. Wash down the vehicle and equipment with hot, soapy water for 2 to 3 minutes.

C-50. Because speed is important, do not check vehicles for contamination after vehicle washdown. Remove only gross contamination.

THOROUGH DECONTAMINATION

C-51. Thorough decontamination reduces contamination to negligible risk levels. It restores combat power by removing nearly all contamination from unit and individual equipment. This allows troops to operate equipment safely for extended periods at reduced MOPP levels. A contaminated unit conducts detailed troop decontamination under supervision of the chemical unit. Ordinarily, the chemical unit selects a

site, sets it up, and performs the detailed equipment decontamination with assistance from the contaminated unit. A small risk from residual contamination remains, so periodic contamination checks must be made after this operation.

C-52. Thorough decontamination is conducted as part of an extensive reconstitution effort in brigade, division, and corps support areas; support sites at lower levels cannot provide the quantities of decontamination resources (such as water, decontaminants, and time) required for such an extensive process. In some cases, a contaminated unit can conduct a thorough decontamination operation with organic decontamination assets, but support from a chemical unit is usually required.

C-53. After thorough decontamination, the unit moves into an adjacent assembly area for reconstitution. Support elements from the brigade, division, or corps support areas replenish combat stocks, refit equipment, and replace personnel and equipment. The newly reconstituted unit leaves the assembly area fully operational and fit to return to battle.

C-54. Thorough decontamination does the most thorough job of getting rid of contamination and its hazards, but it often is not possible. It requires large quantities of valuable resources that may not be immediately available. The next best solution is to decontaminate only what is necessary to sustain the force and continue to fight.

SECTION VI – RECONNAISSANCE AND SECURITY IN AN NBC ENVIRONMENT

C-55. In an ideal situation, all NBC reconnaissance will be performed by an NBC reconnaissance platoon. When NBC reconnaissance assets are not available, the troop will assign one of its recce platoons the task to perform NBC reconnaissance. In other cases, the troop must be prepared to integrate NBC reconnaissance elements into troop reconnaissance operations.

C-56. The NBC reconnaissance platoon may work closely with the troop. When the two organizations are working together, their capabilities should complement each other. The command relationship between the troop and NBC reconnaissance platoon, which should be based on METT-TC factors, may be one of the following:

- The troop providing assets OPCON to the NBC reconnaissance platoon.
- The NBC reconnaissance platoon OPCON to a platoon from the troop.
- A platoon and the NBC platoon working together under the control of the troop commander.

C-57. As an example, if the primary focus of the troops' reconnaissance mission is to locate contaminated areas, the NBC reconnaissance platoon leader may be selected to lead the operation. On the other hand, the troop may select one of its organic platoons to lead and coordinate the mission if threat presence is significant, if extensive dismounted operations are

anticipated, or if the mission is oriented on the threat force. FM 3-20.98 [FM 17-98] provides additional details concerning the integration of NBC and recce platoon operations.

C-58. In all cases when the two types of units are operating together, the NBC platoon's primary task should be NBC reconnaissance. The troop has capabilities for which it is better equipped or organized; it should perform tasks related to those capabilities, such as the following:

- Overwatch and security for NBC reconnaissance elements.
- Dismounted operations in concert with NBC reconnaissance.
- Reconnaissance of bypasses once a contaminated area is identified.
- Initial location of contaminated areas, followed by handover to the NBC reconnaissance platoon for detailed reconnaissance and marking.
- Liaison or command and control linkup between the NBC reconnaissance platoon and the commander of the scouts.

SECTION VII – TOXIC INDUSTRIAL MATERIAL HAZARDS

C-59. Toxic industrial material (TIM) hazards, previously considered insignificant during wartime, increase greatly in significance when manufactured, stored, distributed, or transported in close proximity to fixed sites, ports, or airfields. Deliberate or inadvertent release significantly increases hazards to the indigenous population and US forces. While continuous wave (CW) agents are highly toxic and lethal even in small amounts, countries that produce them are generally known and are few in number when compared to the quantities and universal nature of TIMs. Given the prevalence of TIMs throughout the world, US forces use area studies, intelligence estimates, and/or economic studies to possibly indicate TIM hazards in an area of operation. TIMs should be recognized for the singular hazards they pose as well as the potential risks that may result from explosion or fire. Most TIMs present a vapor (inhalation) hazard. Vapor concentration at or near the point of release may be very high and may reduce the oxygen concentration below that required to support life. TIMs are generally classified in one of the following categories:

- Agricultural—insecticides, herbicides, and fertilizers.
- Industrial—chemical and radiological materials used in manufacturing processes or for cleaning.
- Production or research—chemicals and biological materials produced or stored in a facility.
- Radiological—nuclear power plants, medical facilities, and laboratories.

Appendix D

Stability Operations and Support Operations

The reconnaissance troop's flexibility and deployability has made it an attractive asset for use in stability operations and support operations as part of its parent unit. The troop may perform a variety of missions in a wide range of political, military, and geographical environments and in both combat and noncombat situations. These operations will normally be decentralized and can require immediate decisions, down to the squad leader level, that may have strategic or operational consequences. The distinction between these roles and situations will not always be clear, presenting unique challenges for the troop, its leaders, and its soldiers.

CONTENTS

Stability Operations D-1
Characteristics of Stability Operations D-2
The Army's Role in Stability Operations D-2
Types of Stability Operations D-3
Considerations for Stability Operations D-8
Support Operations D-9
Characteristics of Support Operations D-9
The Army's Role in Support Operations D-10
Types of Support Operations D-10
Forms of Support Operations D-11
Considerations for Support Operations D-14
Troop's Role in Stability/Support Operations D-15
Planning and Preparation Considerations D-16
Force Protection D-25
Task Organization D-25
CSS Considerations D-25
Media Considerations D-26
Operations with Outside Agencies D-26
Leader Requirements D-26
Soldiers' Responsibilities D-26
Employment Considerations D-27
Specific Troop Tasks D-27

SECTION I – STABILITY OPERATIONS

D-1. Stability operations are conducted outside the US and its territories to promote and protect US national interests by influencing political, civil, and military environments and by disrupting specific illegal activities. Combatant commanders employ Army forces to accomplish those goals by supporting diplomatic initiatives, improving military-to-military relations, and by deterring or resolving conflict. Their overall purpose is to promote and sustain regional stability.

D-2. Stability operations may include both developmental and coercive actions. Developmental actions are aimed at enhancing a government's willingness and ability to care for its people. Coercive actions involve the application of limited force or the threat of force to change the environment within the AO.

CHARACTERISTICS OF STABILITY OPERATIONS

D-3. Stability operations are normally executed in the context of the geographic combatant commander's theater strategy. Commanders employ military forces to complement and reinforce the other elements of national power as part of their theater engagement plan.

D-4. Stability operations may include both developmental and coercive actions. Developmental actions enhance a host nation (HN) government's willingness and ability to care for its people. Coercive actions apply carefully prescribed limited force or threat of force to change the environment of the AO. Military forces conduct stability operations to accomplish one or more of the following:

- Protect national interests (as defined by the National Command Authority).
- Promote peace/deter aggression.
- Satisfy treaty obligations or enforce agreements and policies.
- Reassure allies, friendly governments, and agencies.
- Encourage a weak or faltering government.
- Maintain or restore order.
- Protect life and property.
- Demonstrate resolve.
- Prevent, deter, or respond to terrorism.
- Reduce the threat of conventional arms and weapons of mass destruction to regional security.
- Eliminate or contain subversion, lawlessness, and insurgency.

THE ARMY'S ROLE IN STABILITY OPERATIONS

D-5. Army forces are particularly well suited for stability operations because they are trained, equipped, and organized to control land, populations, and situations for extended periods of time. Its capabilities provide the commander vital options to meet operational requirements. This routinely includes conducting peace operations, military-to-military contacts, humanitarian demining operations, and multinational training exercises or exchanges.

D-6. Stability operations are inherently complex and place greater demands at the small-unit level. Junior leaders are required to develop engagement skills while maintaining warfighting skills. Capable, trained, disciplined, high-quality leaders, soldiers, and teams are especially critical to success. Soldiers and units at every level must be flexible and adaptive. Often stability operations require the mental and physical agility to shift from noncombat to combat operations and back again.

D-7. Stability operations conducted by Army forces complement and are complemented by offensive, defensive, and support operations. Stability operations help restore law and order during support operations in unstable areas. Offensive and defensive operations may be necessary to defeat adversaries intent on preventing the success of a stability operation. Shows of force (presence) often precede offensive and defensive

operations in attempts to deter aggression and provide opportunities for diplomatic and economic solutions. The ability of Army forces to stabilize a crisis is directly related to its ability to attack and defend.

D-8. Army forces may conduct stability operations before hostilities, in crisis situations, during hostilities, and after hostilities. Before hostilities begin, stability operations focus on deterring or preempting conflict. In a crisis situation, a stability operation may resolve a potential conflict or prevent escalation. During hostilities, it can help keep armed conflict from spreading. Following hostilities, it can provide a secure environment for civil authorities to work in to regain control.

PEACETIME MILITARY ENGAGEMENT

D-9. Peacetime military engagement (PME) activities are stability operations designed to have a positive impact on the regional security environment and preclude conflict. The objectives of PMEs are to open communication, increase interoperability, increase regional military professionalism, educate HN forces on the role of the military in a democracy, and increase regional stability. Examples of PME activities include multinational training exercises, individual training and observers, medical and engineer projects and exercises, and staff information exchanges.

RAPID RESPONSE AND PRECLUSION

D-10. Rapidly responding in the early stages of an imminent or ongoing crisis is a critical component of stability operations. For example, rapidly responding to a smaller-scale contingency (SSC) can defuse a crisis situation and restore regional stability. Prompt deployment of sufficient forces in the initial phase of a crisis can preclude the need to deploy a larger force later. The deployed force must be capable of conducting decisive offensive and defensive operations to achieve successful preclusion.

PRESENCE AND DETERRENCE

D-11. Presence promotes a secure environment in which diplomatic and economic programs designed to eliminate root causes of instability may flourish. It can take the form of forward basing, forward deploying, or prepositioning assets in an AO.

D-12. Deterrence for both SSCs and major theaters of war (MTW) is the sustainable presence of strong, capable ground forces. If deterrence fails, or if required, Army forces must be ready to transition to decisive combat operations. Effective deterrent forces should ideally be capable of conducting decisive operations immediately.

TYPES OF STABILITY OPERATIONS

D-13. There are typically 10 types of stability operations. These operations may be conducted to complement any offensive, defensive, and/or support operation; may be the decisive operation; or they may occur before, during, and/or after an offensive, defensive, and support operation. The types of stability operations, which are described in this discussion, are the following:

- Peace operations.

- Foreign internal defense.
- Security assistance.
- Humanitarian and civic assistance.
- Support to insurgencies.
- Support to counterdrug operations.
- Combating terrorism.
- Noncombatant evacuation operations (NEO).
- Arms control.
- Show of force.

PEACE OPERATIONS

D-14. Peace operations support strategic and policy objectives. Peace operations include peacekeeping operations and peace enforcement operations. The US usually participates in peace operations as part of a UN force or another multinational organization; it reserves the right to conduct peace operations unilaterally. Peace operations require the continual assessment of commanders and staffs to ensure that units are ready to transition into other operations as a result of an escalation of the current situation. The transition may be from a US unilateral operation or multinational coalition to a UN led coalition, from noncombat to combat operations, and from military to civilian control.

Peacekeeping Operations

D-15. A peacekeeping operation is conducted with the consent of all major parties to a dispute, designed to monitor and facilitate implementation of agreements (cease fire, truce, or other such agreements), and support diplomatic efforts to reach a long term political settlement. They use or threaten the use of force only in self-defense or as a last resort to accomplish the mission.

Peace Enforcement Operations

D-16. Peace enforcement operations are the application of military force, or threat of force, normally to compel compliance with resolutions or sanctions designed to maintain or restore peace and order. Peace enforcement operations normally include one or more of six subordinate operations:

- Forcible separation of belligerents.
- Establishment and supervision of protected areas.
- Sanction and exclusion zone enforcement.
- Movement denial and guarantee.
- Restoration and maintenance of order.
- Protection of humanitarian assistance.

D-17. The nature of this type of mission requires that the military force must be capable of conducting combat operations. Maintaining and demonstrating combat capability is essential for successful peace enforcement operations.

Operations in Support of Diplomatic Efforts

D-18. Forces may conduct operations in support of diplomatic efforts to establish peace and order before, during, and after a conflict. These operations include preventive diplomacy, peacemaking, and peace building. Military support of diplomatic activities improves the chances for success by lending credibility to diplomatic actions and demonstrating resolve to achieve viable political settlements.

D-19. **Preventive Diplomacy.** Preventive diplomacy is diplomatic action taken in advance of a predictable crisis to prevent or limit violence. Army forces are not normally directly involved in preventive diplomacy but may support a state department effort by providing transportation and communications assets. In some cases, military forces may conduct a preventive deployment or show of force as part of the overall effort to deter conflict.

D-20. **Peacemaking.** Peacemaking is the process of diplomacy, mediation, negotiation, or other forms of peaceful settlement that arranges an end to a dispute and resolves the issue that led to the conflict. It includes military actions that support the diplomatic process. Army forces participate in these operations primarily by performing military-to-military contacts, exercises, peacetime deployments, and security assistance.

D-21. **Peace Building.** Peace building consists of post-conflict actions, predominately diplomatic and economic, that strengthen and rebuild governmental infrastructure and institutions in order to avoid a relapse into conflict. Military actions that support peace building are designed to identify, restore, and support structures that strengthen and solidify peace. Typical peace building activities include restoring civil authority, rebuilding physical infrastructure, providing structures and training for schools and hospitals, and helping reestablish commerce.

FOREIGN INTERNAL DEFENSE

D-22. Foreign internal defense is participation by civilian and military agencies of a government in any action programs taken by another government to free and protect its society from subversion, lawlessness, and insurgency. The main objective is to promote stability by helping a HN establish and maintain institutions and facilities responsive to its people's needs.

D-23. Army forces in foreign internal defense normally advise and assist HN forces conducting operations to increase their capabilities. When conducting foreign internal defense, all Army forces provide indirect or direct support (not involving combat operations), or conduct combat operations to support HN efforts.

SECURITY ASSISTANCE

D-24. Security assistance refers to a group of programs by which the US provides defense articles, military training, and other defense-related services to foreign nations by grant, loan, credit, or cash sales in furtherance of national policies and objectives.

D-25. Army forces support security assistance efforts through military training teams, maintenance support personnel and training, and related activities.

HUMANITARIAN AND CIVIC ASSISTANCE

D-26. Humanitarian and civic assistance programs consist of assistance provided in conjunction with military operations and exercises. In contrast to humanitarian and disaster relief operations, they are planned activities. Humanitarian and civic actions are limited to the following categories:

- Medical, dental, and veterinary care provided in rural areas of a country.
- Construction of rudimentary surface transportation systems.
- Well drilling and construction of basic sanitation facilities.
- Rudimentary construction and repair of public facilities.

SUPPORT TO INSURGENCIES

D-27. The US may support insurgencies that oppose regimes that threaten US interests or are a threat to regional stability. This type of mission is normally carried out by special operation forces. Support generally includes logistic and training support, but normally not combat operations.

SUPPORT TO COUNTERDRUG OPERATIONS

D-28. In 1986, the President declared drug trafficking a threat to national security. This resulted in US forces being employed in a variety of operations to support other agencies that are responsible for detecting, disrupting, interdicting, and destroying illicit drugs and the infrastructure (personnel, material, and distribution systems) of illicit drug-trafficking entities. Counterdrug activities are always conducted in conjunction with another government agency. When executed inside of the US and its territories, counterdrug operations are considered domestic support operations. Army forces do not engage in direct action during counterdrug operations. Typical support to counterdrug operations include the following:

- Detection and monitoring.
- Host nation.
- Command, control, communications, and computers.
- Intelligence.
- Planning.
- Logistics.
- Training.
- Manpower.
- Research, development, and acquisition.
- Reconnaissance.

COMBATING TERRORISM

D-29. In all types of stability operations, counterterrorism and antiterrorism activities are a continuous requirement in protecting installations, units, and individuals from the threat of terrorism. These operations contain elements of both offensive and defensive operations. Counterterrorism encompasses a full range of offensive measures to

prevent, deter, and respond to terrorism including strikes and raids. This is a specified mission for selected special operation forces. Antiterrorism focuses on defensive measures used to reduce vulnerabilities of individuals and property to terrorist attacks, to include limited response and containment by local military forces. Commanders must take the security measures necessary to accomplish the mission and protect the force against terrorism. Typical antiterrorism actions include the following:

- Coordination with local law enforcement.
- Positioning and hardening of facilities.
- Physical security actions designed to prevent unauthorized access or approach to facilities.
- Crime prevention and physical security actions that prevent theft of weapons, munitions, identification cards, and other materials.
- Policies regarding travel, size of convoys, breaking of routines, HN interaction, and off-duty restrictions.
- Protection from WMD.

NONCOMBATANT EVACUATION OPERATIONS

D-30. NEOs are primarily conducted to evacuate US citizens whose lives are in danger from locations in a foreign nation to a secure area. They may also include HN civilians and third-country nationals. NEOs may take place in a permissive, uncertain, or hostile environment. It can be conducted as a prelude to combat actions, as part of deterrent actions, or as part of peace operations. NEOs involve swift insertion and temporary occupation of an objective, followed by a planned withdrawal. Leaders use only the amount of force required for self-defense and protection of evacuees.

ARMS CONTROL

D-31. Arms control operations are normally conducted to support arms control treaties and enforcement agencies. Army forces may conduct arms control during combat operations or stability operations to prevent escalation of the conflict and reduce instability. This could include a mandated disarming of the belligerents and/or the collection, storing, and destruction of conventional munitions and weapon systems.

SHOW OF FORCE

D-32. A show of force is an operation designed to demonstrate US resolve that involves the increased visibility of US deployed forces. The US conducts show of force for three reasons: to bolster and reassure allies, to deter potential aggressors, and to gain or increase influence. The show of force operation usually involves the deployment or build-up of forces in the AO, an increase in the readiness status and level of activity of designated forces, or a demonstration of operational capabilities by forces in the AO. Units assigned this mission must assume that combat is not only possible but also probable.

CONSIDERATIONS FOR STABILITY OPERATIONS

D-33. Planning, preparing, executing, and assessing stability operations is fundamentally identical to the process used for offensive, defensive, and support operations. However, the following six considerations help Army forces develop tailored concepts and schemes for stability operations.

LEVERAGE INTERAGENCY, JOINT, AND MULTINATIONAL COOPERATION

D-34. Unity of effort is fundamental to success in stability operations. Achieving unity of effort requires constant coordination with all involved agencies. Commanders must adapt to situations where there may not be a clear delineation of authority and responsibility. This is especially important in stability operations since the military is often the supporting rather than the supported agency.

D-35. Coordinating and integrating civilian and military activities should take place at every level. A coordination center such as the civil-military operations center (CMOC) is designed to accomplish this task. These operations centers should include as many agencies as possible. Effective civil-military operations can reduce the use of US resources through coordination with host and third-nation governmental organizations, nongovernmental organizations (NGO), and international organizations operating in the AO.

ENHANCE THE CAPABILITIES AND LEGITIMACY OF THE HOST NATION

D-36. Army forces must demonstrate the proper respect for the HN government, police, and military forces to be successful in a stability operation. The HN military and police forces must be integrated as much as possible with all aspects of planning, preparing, executing, and assessing every operation.

D-37. When HN capabilities are inadequate for the task, Army forces focus on enhancing those capabilities through training, advice, and assistance. Commanders make maximum use of HN forces and personnel as lead for all possible activities. These include offensive and defensive operations, protection of the civilian populace, security of critical facilities and installations, intelligence and counterintelligence tasks, new construction and reconstruction, psychological operations (PSYOP), police duties, and civil affairs (CA).

UNDERSTAND THE POTENTIAL FOR UNINTENDED CONSEQUENCES OF INDIVIDUAL AND SMALL-UNIT ACTIONS

D-38. Individual and small-unit actions can have consequences disproportionate to the level of command or amount of force involved. In some cases, tactical operations and individual actions can have strategic impact. Recognizing and avoiding these potential problems requires trained, disciplined, and knowledgeable leaders and soldiers at every level. Every soldier must be aware of the operational and strategic context of the mission. Additionally, each soldier must understand the potential military, political, and legal consequences of the actions they take or fail to take. Dissemination of this information throughout the force minimizes any possible confusion regarding desired objectives.

DISPLAY THE CAPABILITY TO USE FORCE WITHOUT THREATENING

D-39. Army forces conducting stability operations must be capable of limited combat operations for self-defense. The intent is to demonstrate strength and resolve without provoking an unintended response. To be effective, shows of force in stability operations cannot be perceived as attempts to goad or bully an opponent into an attack.

D-40. Units can display preparedness by routinely conducting demanding combat training in the AO. Training should include challenging soldiers to react to situations involving weapons use, levels of force, and rules of engagement (ROE).

ACT DECISIVELY TO PREVENT ESCALATION

D-41. Army forces must always be prepared to act with speed and determination when carrying out assigned tasks. Opponents of stability may perceive hesitation to act decisively as weakness. Units and individuals must pursue military objectives energetically and apply military power forcefully. By doing so, Army forces assure friend and foe alike that they not only can protect themselves and the people and facilities under their charge but also achieve stability objectives.

APPLY FORCE SELECTIVELY AND DISCRIMINATELY

D-42. Commanders must make sure their units apply force consistent with and adequate to assigned objectives and employ combat power selectively in accordance with assigned missions and prescribed legal and policy limitations. Commanders use the ROE to guide the tactical application of combat power. When available, nonlethal capabilities can provide additional tools to augment, but not replace, the traditional means of deadly force. Nonlethal means are particularly valuable in both stability operations and support operations as they expand the number of options that are available to confront situations in which the use of deadly force is not warranted or ill advised. The commander on the ground is best qualified to estimate the correct degree of force that must be used, consistent with the ROE.

SECTION II – SUPPORT OPERATIONS

D-43. Support operations employ Army forces to assist foreign and domestic civil authorities as they prepare for or respond to crises and relieve suffering. Support continues until civil control can be reestablished or support is no longer required. The overall purpose of support operations is to meet the immediate needs of designated groups, for a limited time, until civil authorities can accomplish these tasks without Army assistance.

CHARACTERISTICS OF SUPPORT OPERATIONS

D-44. Support operations involve Army forces providing essential supplies, capabilities, and services to help civil authorities deal with situations beyond their control. In most cases, Army forces are focused on overcoming conditions created by natural or man-made disasters. Army forces may provide relief or assistance directly. However, Army force

activities in support operations most often involve setting the conditions that facilitate civil authorities or NGOs providing required direct support to the affected population.

THE ARMY'S ROLE IN SUPPORT OPERATIONS

D-45. The Army is not specifically organized, trained, or equipped for support operations. Instead, Army elements and forces, tailored for warfighting, are rapidly adapted to dominate a crisis or disaster situation. In support operations, Army forces apply decisive military capabilities to set the conditions for the supported civil authorities to achieve success. Army forces have a functional chain of command, reliable communications, and well trained and equipped forces that can operate and sustain themselves in an austere environment with organic assets. In most situations, Army forces involved in support operations, both domestic support organizations and foreign humanitarian assistance, will execute a combination of multiple overlapping activities.

TYPES OF SUPPORT OPERATIONS

D-46. The two types of support operations are domestic support operations and foreign humanitarian assistance operations. Domestic support operations are conducted in the US and its territories. Active as well as reserve component Army forces respond to domestic support operations. Foreign humanitarian assistance operations are conducted abroad and under the direction of a combatant commander.

DOMESTIC SUPPORT OPERATIONS

D-47. Domestic support operations are those activities and measures taken by Department of Defense to foster mutual assistance and support between DoD and any civil government agency in planning or preparedness for, or in the application of resources for response to, the consequences of civil emergencies or attacks, including national security emergencies or major disasters. A Presidential Declaration of an emergency or disaster area usually precedes a domestic support operation.

D-48. The US military provides domestic support primarily in accordance with a DoD directive, military assistance to civil authorities. The military assistance to civil authorities directive addresses responses to both natural and man-made disasters and includes military assistance to civil disturbances, counterdrug activities, combating terrorism, and law enforcement.

D-49. In accordance with the Constitution, civilian government is responsible for preserving public order. The Constitution does allow the use of military forces to protect federal and civilian property and functions. The Posse Comitatus Act restricts the use of the military in federal status and prevents it from executing laws and performing civilian law enforcement functions within the US.

D-50. The operations focus on the condition of all types of natural and man-made properties, with the goal of helping to protect and/or restore these properties as requested. Typically, environmental operations are conducted in response to such events as forest and grassland fires, hazardous material releases, floods, and earthquakes.

FOREIGN HUMANITARIAN ASSISTANCE

D-51. Foreign humanitarian assistance operations are conducted to relieve the negative effects of natural or man-made disasters or other endemic conditions such as human pain, disease, or hunger. The US military typically supplements the HN authorities in concert with other civilian agencies—US, international, governmental, and private.

D-52. Foreign humanitarian assistance operations are limited in scope and duration, focus on providing relief for the immediate crises, and are only conducted in a permissive environment. Crises or disasters caused by hostile individuals or factions attacking its government would normally be classified as a stability operation. In environments where the situation is vague or hostile, support activities conducted would be considered a subset of a larger stability, offensive, or defensive operation.

D-53. The majority of foreign humanitarian assistance operations closely resemble domestic support operations. The distinction between the two is the legal restrictions applied to US forces inside the US and its territories. The Posse Comitatus Act does not apply to US forces overseas.

FORMS OF SUPPORT OPERATIONS

D-54. Most offensive, defensive, and stability operations will require some form of support operations before, during, and after execution. Support operations generally fall into four categories:

- Relief operations.
- Support to incidents involving WMD.
- Support to civil law enforcement.
- Community assistance.

D-55. Support operations may be independent actions, or they may complement offensive, defensive, and stability operations.

RELIEF OPERATIONS

D-56. In general, the actions performed during relief operations are identical in both domestic support operations and foreign humanitarian assistance operations. The actions can be characterized as either disaster relief, which focuses on recovery of critical infrastructure after a natural or man-made disaster, or humanitarian relief, which focuses on the well being of supported populations. Relief operations accomplish one or more of the following:

- Save lives.
- Reduce suffering.
- Recover essential infrastructure.
- Improve quality of life.

Disaster Relief

D-57. This encompasses the actions taken to restore or recreate the minimum infrastructure to allow effective humanitarian relief to be accomplished and set the conditions for longer-term recovery. This includes establishing and maintaining the minimum safe working

conditions, minus security measures necessary to protect relief workers and the affected population from additional harm. Disaster relief may involve repairing or demolishing damaged structures, restoring or building bridges, roads and airfields, and removing debris from critical routes and relief sites.

Humanitarian Relief

D-58. This focuses on life-saving measures to alleviate the immediate needs of a population in crisis. It often includes the provision of medical support, food, water, medicines, clothing, blankets, shelter, and heating/cooking fuel. In some cases, it involves transportation support to move affected people from a disaster area.

Phases of Relief Operations

D-59. Although each operation is unique, support operations are generally conducted in three broad phases:

- Response.
- Recovery.
- Restoration.

D-60. Army elements can expect to be most heavily committed during the response phase. They will be progressively less involved during the recovery phase, with only very limited activity, if any, during the restoration phase.

D-61. **Response Phase.** In the response phase, commanders focus on life-sustaining functions that are required by those in the disaster area. These functions describe response operations:

- Search and rescue.
- Emergency flood control.
- Hazard identification.
- Food distribution.
- Water production, purification, and distribution.
- Temporary shelter construction and administration.
- Transportation support.
- Fire fighting.
- Medical support.
- Power generation.
- Communications support.

D-62. **Recovery Phase.** Recovery phase operations begin the process of returning the community infrastructure and related services to a status that meets the immediate needs of the population. Typical recovery operations include—

- Continuation of response operations as needed.
- Damage assessment.
- Power distribution.
- Water and sanitation services.

- Debris removal.

D-63. **Restoration Phase.** Restoration is a long-term process that returns the community to predisaster normality. Restoration activities do not generally involve large numbers of military forces. When they are involved, Army elements generally work with affected communities in the transfer of responsibility to other agencies as military support forces redeploy.

SUPPORT TO INCIDENTS INVOLVING WEAPONS OF MASS DESTRUCTION

D-64. Military operations assist civil authorities in protecting US territory, population, and infrastructure prior to an attack by supporting domestic preparedness and critical asset protection programs. If an attack occurs, military support will respond to the consequences of the attack.

Domestic Preparedness

D-65. The Army's role in facilitating domestic preparedness is to strengthen the existing expertise of civil authorities. This is done in two primary areas—response and training. Response is the immediate reaction to an attack and training includes what happens after the attack.

Protection of Critical Assets

D-66. The purpose of this program is to identify critical assets and to assure their integrity, availability, survivability, and capability to support vital DoD missions across the full spectrum of military operations. Critical assets include telecommunications, electric power, gas and oil, banking and finance, transportation, water, and emergency services. An attack on any of these assets may disrupt civilian commerce, government operations, and the military.

Response to Weapons of Mass Destruction Incidents

D-67. The initial response will be primarily from local assets, but sustained Army forces participation may be quickly required. The Army's capabilities in this environment include the following:

- Detection.
- Decontamination and medical care, including assessment.
- Triage treatment.
- Medical evacuation.
- Hospitalization.
- Follow-up on victims of chemical and biological agents.

SUPPORT TO CIVIL LAW ENFORCEMENT

D-68. Support to domestic civil law enforcement generally involves activities related to counterterrorism, counterdrug, civil disturbance operations, or general support. Army support may involve providing resources, training, or direct support. Federal forces remain under the control of their military chain of command at all times while providing the support.

Support to Counterterrorism

D-69. Military units in support of the lead agency may operate to eliminate identified threats. Assistance may be provided in the areas of transportation, equipment, training, and personnel. When terrorists pose an imminent threat to US territory, its people, and critical assets, the US military may be used to support operations to counter these threats, using ground, air, space, special operations, or maritime forces. The Federal Bureau of Investigation is responsible for crises management in the US.

Support to Counterdrug Operations

D-70. Army forces support to domestic counterdrug operations is very limited and will usually be in a support role only.

Civil Disturbance Operations

D-71. The Army assists civil authorities in restoring law and order when local and state law enforcement agencies are unable to resolve the civil disturbance. Federal Army forces assist in restoring law and order when the magnitude of a disturbance exceeds the capabilities of local and state law enforcement agencies, including the National Guard. Army participation is to apply the minimum force necessary to restore order to the point where civilian authorities no longer require military assistance.

General Support

D-72. The Army may also be directed to provide training, share information, and provide equipment and facilities to federal, state, and local civilian law enforcement agencies.

COMMUNITY ASSISTANCE

D-73. Community assistance is a broad range of activities designed to strengthen the relationship between the Army and the American people. These projects should exercise individual soldier skills, encourage teamwork, challenge leader planning and coordination skills, and result in accomplishments that are measurable. Example activities include Youth Physical Fitness Programs, Medical Readiness Programs, and Antidrug Programs.

CONSIDERATIONS FOR SUPPORT OPERATIONS

D-74. Planning and executing support operations are fundamentally similar to planning, preparing, executing, and assessing offensive, defensive, and stability operations. However, while each support operation is unique, the following four broad considerations can help forces develop mission-specific concepts and schemes for executing support operations.

PROVIDE ESSENTIAL SUPPORT TO THE LARGEST NUMBER OF PEOPLE

D-75. Commanders will be required to allocate finite resources to achieve the greatest good. Additionally, commanders require an accurate assessment of what needs to be done to effectively employ military power. In some cases, warfighting reconnaissance capabilities and techniques can be executed to accomplish this task. They must determine how and where to apply limited assets to benefit the most people in the most efficient way. Initial efforts are usually focused on restoring vital

services, which include food and water distribution, medical aid, power generation, search and rescue, and fire fighting.

COORDINATE ACTIONS WITH OTHER AGENCIES

D-76. Domestic support operations are typically joint and interagency, and foreign humanitarian assistance operations are usually multinational. Unity of effort between the military and local authorities requires constant communication to ensure that tasks are being conducted in the most efficient and effective way and resources are used wisely.

ESTABLISH MEASURES OF EFFECTIVENESS

D-77. A critical aspect of mission handover is to have objective standards for measuring progress. These measures of effectiveness determine the degree to which an operation is accomplishing its established objectives. For example, a measure of effectiveness might be the number of deaths caused by starvation. This is an indicator that food convoys are reaching the designated areas. These measures are situationally dependent and must be adjusted as the situation changes and guidance from higher is developed.

HAND OVER OPERATIONS TO CIVILIAN AGENCIES AS SOON AS FEASIBLE

D-78. Support operations planning must always include the follow-on actions of the civilian agencies and the HN to restore conditions to normal. The following considerations determine handover feasibility:

- Condition of supported population and governments.
- Competing mission requirements.
- Specified and implied commitment levels—
  - Time.
  - Resources.
  - Forces.
- Maturity of the support effort.

SECTION III – TROOP'S ROLE IN STABILITY OPERATIONS AND SUPPORT OPERATIONS

D-79. The reconnaissance troop has unique capabilities that make it an important asset to US and combined forces executing missions in stability and support operations. Whether it is operating organic or task organized to another light or heavy force, the troop may be called upon to support a wide range of operations in various political and geographical environments.

D-80. The reconnaissance troop is used to execute activities that take maximum advantage of its inherent capabilities of mobility, stealth, reconnaissance, surveillance, and (HUMINT) collection. The factors of METT-TC and the operational considerations prevalent in stability and support operations may modify these capabilities for successful mission accomplishment. As a result, the reconnaissance troop occasionally may

be assigned operations that are normally handled by specially trained and equipped units. For example, the troop may be tasked for crowd and riot control if a shortage of military police exists. Additionally, troop leadership may find itself involved with supporting local authorities, or the lack of, with the basic needs required for maintaining order and life support. The list below shows some of the unique capabilities the troop offers:

- Communications (C2).
- Liaison capability (translations).
- Mobility.
- 24-hour operations.
- Own indirect fire asset (mortars).
- Patrolling/surveillance.
- Leadership (squad to troop-level offers over 15 individuals able to take charge of a situation).

PLANNING AND PREPARATION CONSIDERATIONS

D-81. Disciplined, well-trained, combat-ready leaders and soldiers can adapt to the specialized demands of stability operations and support operations. To achieve this degree of readiness, however, the reconnaissance troop must be thoroughly trained before deployment on the operational environment, ROE/ ROI, force protection, and individual soldier responsibilities. The training must be updated continuously following deployment.

D-82. There are several important considerations that will influence planning and preparation for stability operations and support operations, including the following:

- Environment.
- Tempo.
- Intelligence.
- Decentralized operations.
- ROE.
- Graduated response.
- ROI.

D-83. Below are brief discussions of the considerations. Refer to FM 3-07.3 [FM 100-23] for a detailed discussion of these subjects.

ENVIRONMENT

D-84. Stability operations and support operations can take place in any part of the world. To deal effectively with the diverse situations they may face, US forces must undergo orientation training on the complex conditions and factors at work in a specific region. Each soldier must understand the political and economic situation, as well as the cultures, climates, and terrain of the region. He should understand the military situation, especially the doctrine, tactics, and equipment that are employed by belligerent, guerrilla, and terrorist forces. Orientation training should also clarify the following environmental factors as well as

the planning and operational considerations discussed in the remainder of this section.

TEMPO

D-85. Although extreme tension may underlie stability operations and support operations, the tempo of these operations is generally slow. Nonetheless, the speed of military action can vary widely, from fast, violent tactical movement by a reaction force for the purpose of relieving encircled friendly forces to the occupation of checkpoints to control vehicular and civilian traffic.

D-86. Throughout stability operations and support operations, the threat can be expected to execute both overt and covert operations to test friendly reaction times and security procedures. Units that are predictable or that lack sound operations security (OPSEC) leave themselves susceptible to attack. For the troop, the key to a secure environment is not only to maintain the highest possible level of OPSEC, but also to vary the techniques by which security procedures are executed (e.g., changing patrol routes and moving checkpoints).

INTELLIGENCE

D-87. Intelligence is crucial during the execution of stability operations and support operations. The threats faced by military forces in these operations are more ambiguous than those in other situations because combatants, guerrillas, and terrorists can easily blend with the civilian population. Before forces are committed and while they are conducting operations, intelligence must be collected, processed, and focused to support all planning, training, and operational requirements. (**NOTE:** See FM 3-07 [FM 100-20] for additional information.)

D-88. In some cases decentralized operations will require the troop to develop intelligence with limited assistance from higher headquarters. The form below (Figure D-1, parts one through four) is an example of a locally devised tool intended for use in urban environments that can be used by the troop to gather and assess intelligence for both stability operations and support operations.

SCOUT / HUMINT Collector URBAN ASSESSMENT

GENERAL

MUNICIPALITY NAME:	URBAN CLASSIFICATION: *(for additional info see 34-130 Urban IPB Anx.)* Neighborhood, Village, Town, City	MGRS Grid Ref
UNIT	NAME OF ASSESSOR	DATE
SOURCE OF INFORMATION (give as much detail as possible – *give a telephone of someone in the village if possible*)		

See Society/Infrastructure section for additional information.

CIVILIAN	Size & Activity
Are Civilians Pro, Anti, or Neutral to US Forces?	

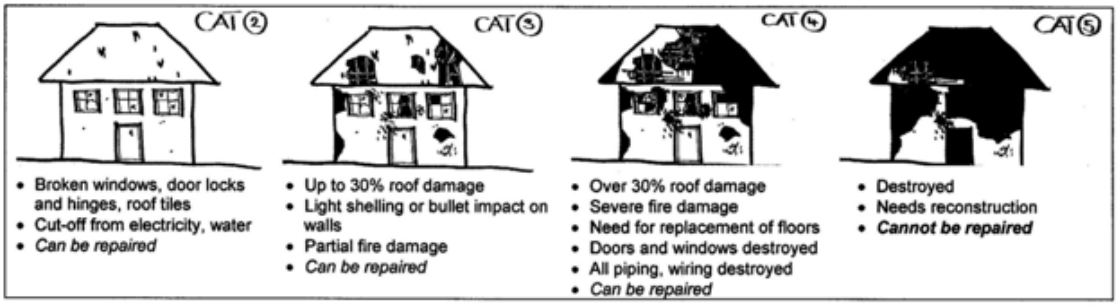
See Enemy & Threat section for additional information.

ENEMY /THREAT	Size & Activity
Note:	

NBC THREAT Y/N	Chemical / Biological / Nuclear Hazard	Individual Reporting	Location of suspected hazard	NBC1 Report Y/ N

DAMAGE TO HOUSES	Total Houses in urban area	Category 1 (Undamaged / unfinished)	Category 2	Category 3	Category 4	Category 5
(see category guide below)	Was there any new war damage to buildings since previous report? **Y / N**					

DAMAGE TO COMMUNITY BUILDINGS	MTS WAREHOUSE	SCHOOL	MOSQUE/CHURCH	SHOPS	BAKERY	HEALTH FAC.
	No. / Category	No. / Category	No. / Category	No. / Category	No. / Category	No. / Category


CAT ②
CAT ③
CAT ④
CAT ⑤
• Broken windows, door locks and hinges, roof tiles
• Cut-off from electricity, water
• *Can be repaired*
• Up to 30% roof damage
• Light shelling or bullet impact on walls
• Partial fire damage
• *Can be repaired*
• Over 30% roof damage
• Severe fire damage
• Need for replacement of floors
• Doors and windows destroyed
• All piping, wiring destroyed
• *Can be repaired*
• Destroyed
• Needs reconstruction
• ***Cannot be repaired***

ROAD ACCESS IN SUMMER	Car Y / N	4WD Y / N	Light Truck Y / N	Heavy Truck Y / N	IAV Y / N	MGS Y / N	LT Track Y / N	Tank Y / N
ROAD ACCESS IN WINTER	Car Y / N	4WD Y / N	Light Truck Y / N	Heavy Truck Y / N	IAV Y / N	MGS Y / N	LT Track Y / N	Tank Y / N

Figure D-1. Example Scout Report that Supports Information Requirements for Urban Areas (Part One)

SOCIETY

CURRENT POPULATION Type = Ethnic, Clan, Tribe	Persons	Type/#	Type/#	Type/#

BREAKDOWN	Locals	Returnees	IDPs	Refugees

POPULATION PERCENTAGE	%Male	%Female	%Adults	%Children

RELIGION(S)				

GOVERNMENT ELEMENTS				

POLITICAL PARTY/FACTIONS			

DIVISIONS BETWEEN GROUPS	Explain:

SOURCE OF CONFLICTS	Explain:

INTERNALLY DISPLACED PERSONS (IDPS) – ***one record per village of former residence***

Number of IDPs	from MUNICIPALITY (NAME)	from VILLAGE (NAME)	WHAT'S PREVENTING THEIR RETURN HOME? (See constraints to return box below for possible issues)

CONSTRAINTS TO RETURN: Transport / house damaged / house occupied / village empty / insecurity / fear of other ethnic groups / access to food and basic needs / healthcare / education / water / electricity / etc.

COMMUNITY LEADERS PRESENT	ACTIVIST	MAYOR	HEALTH WORKER	IMAM/PRIEST	TEACHER	POLICE CHIEF
	Name: Tel:					
	FACTION MIL. LDR.					
Name: Tel:						

INFRASTRUCTURE

ENERGY / ELECTRICITY location	Working? Yes / No	Yes / No / Intermittent	Hours working per day	NAME of POC/PIC	NEEDS:

OTHER ENERGY SOURCES: Petrol, Wood, Other_____.
Other energy needs?
Who is assisting with needs (e.g. NGO, government, …)?
Signs of threat use of energy sorces?

COMMUNICATIONS location	Working? Yes / No	Yes / No / Intermittent	Hours working per day	NAME of POC/PIC	NEEDS:
Wire/Phone					
Cellular					
Internet					
Who is assisting with needs (e.g. NGO, government, …)?					
Signs of threat use of communications?					

Figure D-1. Example Scout Report that Supports Information Requirements for Urban Areas (Part Two)

ENEMY/THREAT

Threat activity observe by civilians, factions or US forces within urban area.

THREAT	Size	Activity	Location / MGRS	Unit ID/Uniform	Date/Time	Equipment
Conventional Force						
Paramilitary / Faction						
Terrorist						
Gangs						
Criminal Element						
Barracks – threat Y / N						
Arms Room – threat Y / N						
Cache – threat Y / N						
Other						

EXPLAIN THREAT OBSERVATIONS	
Who observed activity?	
Threat using civilians to advantage?	
Threat use of information? *Propaganda, radio, news, internet, cell*	
Manipulating key facilities?	
Use of all dimensions? *Subterranean, upper floors, basements*	
Type of urban oriented weapons? *Mines, booby traps, snipers, mortars, etc..*	

NOTES:

MEDIA *(Actions are conducted IAW SOP ROE / ROI with contact with media)*

Media activity: Yes / No Explain:	
Type of media: e.g. TV, Publish media, Radio, etc:	
Identity of media:	
Approved by PAO:	
Media representative escorted? / By whom?	
Appear to be neutral, pro, or hostile?	

Figure D-1. Example Scout Report that Supports Information Requirements for Urban Areas (Part Three)

EDUCATION / Name & Loc.	School functioning? Yes / No	NAME of POC/PIC	No. of classrooms	NEEDS:
Who is assisting with needs (e.g. NGO, government, …)?				

WATER STATION location:	Working? Yes / No	Yes / No / Intermittent	Hours working per day	NAME of POC/PIC	NEEDS (to get in working order based off status*):

WATER & SANITATION	% of Households using		CURRENT STATUS*	PERCEIVED WATER...		REMARKS (e.g. able to support our unit)
	Pre-Conflict	Current		QUALITY	QUANTITY	
Wells				Good / Bad	Adequate / Inadequate	
Springs				Good / Bad	Adequate / Inadequate	
Piped distribution				Good / Bad	Adequate / Inadequate	
Electric Pumps				Good / Bad	Adequate / Inadequate	
*STATUS (more than one if necessary): (W)orking / (D)amaged / (C)ontaminated / d(E)stroyed						
Who is assisting with needs (e.g. NGO, government, …)						
Signs of threat use of water sources or support to water source?						

HEALTH (for TYPE, if Ambulanta circle one: S = State; P = Private; for Personnel: (D)octor, (N)urse, (M)ed. Tech for Drugs and Equipment: (A)dequate; (I)nadequate.)							
TYPE (see above)	Daily Consultations	Working	Personnel (number)	Drugs	Equipment	Water	Sanitation
Hospital	Number:	Y / N	____D ____N ____M	A / I	A / I	Y / N	Y / N
Aid Station / Clinic	Number:	Y / N	____D ____N ____M				
Ambulance: S / P	Number:	Y / N	____D ____N ____M				
Who is assisting with needs (e.g. NGO, government, …)?							
Signs of threat use of healthcare?							

FOOD AND COOKING					
% of dairy cattle remaining		% of farms expecting to harvest this summer			
% of families with cooking facilities:		Is there a bakery?	Y / N	Is it operational?	Y / N

SOURCES OF FOOD AVAILABLE IN VILLAGE		Food Item	AVAILABLE	PRICE	
Humanitarian distribution	Y / N	Wheat flour	Y / N	DM / Din	Kg
Household garden / farm	Y / N	Oil	Y / N	DM / Din	Litre
Household stores	Y / N	Sugar	Y / N	DM / Din	Kg
Shops or market	Y / N	Meat	Y / N	DM / Din	Kg
Nearest village with market		Fruit & vegetables	Y / N	DM / Din	Kg
		Coffee	Y / N	DM / Din	Kg
Signs of threat use of food sources?					
Can local food sources support friendly unit?					

ASSISTANCE DISTRIBUTION	Who is responsible for distribution? *(circle or specify)*				Local warehouse / storage facilities?		
	Mayors Office	Mosque/Church	NGO (specify)	Other (specify)	Y / N	Type	Size (m2)

SECONDARY DISTRIBUTION	Is this village used for secondary distribution?	If so, which villages receive assistance from this village?
	Y / N	

Figure D-1. Example Scout Report that Supports Information Requirements for Urban Areas (Part Four)

DECENTRALIZED OPERATIONS

D-89. Although stability operations and support operations are normally centrally planned, execution often takes the form of small-scale, decentralized actions conducted over extended distances. In some situations, junior leaders will have the responsibility for making immediate and monumental decisions on the ground. Effective command guidance and a thorough understanding of ROE are critical at each level.

RULES OF ENGAGEMENT

D-90. ROE are politically imposed restrictions on military operations. Higher military authorities direct the ROE based on the political and tactical situations and the level of threat. For example, these restrictions may require that the forces involved limit their use of firepower to a certain geographical area or that they limit the duration of their operations. Refer to Figure D-2 for an example of ROE for one possible situation.

D-91. ROE must be considered during the planning and execution of all operations. The unit's tactics, techniques, and procedures (TTP) will require adjustment based on each particular situation's ROE. Understanding, adjusting for, and properly executing ROE are especially important to success in stability operations and support operations. The restrictions change whenever the political and military situations change; this means ROE must be updated and explained continuously.

D-92. ROE provide the authority for the soldier's right to self-defense. Each soldier must understand the ROE and be prepared to execute them properly in every possible confrontation. In addition, ROE violations can have operational, strategic, and political consequences that may affect national security; the threat can be expected to exploit such violations.

GRADUATED RESPONSE

D-93. ROE will be published in any stability operation and support operation. As the operation continues and the military is forced to deal with different ROE situations, the threat will quickly determine what US forces can and can't do. With the information, the threat will test US forces and their resolve. For this reason, a graduated response matrix should be used. This provides leaders and soldiers a framework of how to deal with ROE situations. They should be rehearsed using vignettes that actually put the soldiers and leaders in a situation that forces them to work through the graduated response. Refer to Figure D-3 for an example of a graduated response.

All threat military personnel and vehicles transporting threat personnel or their equipment may be engaged subject to the following restrictions:

A. When possible, the threat will be warned first and asked to surrender.

B. Armed force is the last resort.

C. Armed civilians will be engaged only in self-defense.

D. Civilian aircraft will not be engaged, except in self-defense, without approval from division level.

E. All civilians should be treated with respect and dignity. Civilians and their property should not be harmed unless necessary to save US lives. If possible, civilians should be evacuated before any US attack. Privately owned property may be used only if publicly owned property is unavailable or its use is inappropriate.

F. If civilians are in the area, artillery, mortars, AC-130s, attack helicopters, and tube-launched or rocket-launched weapons should not be used against known or suspected targets without the permission of a ground maneuver commander (lieutenant colonel or higher).

G. If civilians are in the area, all air attacks must be controlled by forward air controller or forward observer, and close air support, white phosphorous weapons, and incendiary weapons are prohibited without approval from division.

H. If civilians are in the area, shoot only at known threat locations.

I. Public works, such as power stations, water treatment plants, dams, and other public utilities, may not be engaged without approval from division level.

J. Hospitals, churches shrines, schools, museums, and other historical or cultural sites will be engaged only in self-defense against fire from these locations.

K. All indirect fire and air attacks must be observed.

L. Pilots must be briefed for each mission as to the location of civilians and friendly forces.

M. Booby traps are not authorized. Authority to emplace mines is reserved for the division commander. Riot control agents can be used only with approval from division level.

N. Prisoners should be treated humanely, with respect and dignity.

O. Annex R to the operations plan (OPLAN) provides more detail. In the event this card conflicts with the OPLAN, the OPLAN should be followed.

DISTRIBUTION: ONE FOR EACH SOLDER DEPLOYED (ALL RANKS)

Figure D-2. Example Rules of Engagement

SITUATION: Your unit is conducting an operation (i.e., secure a weapons storage facility). Signs have been posted that no crowds are allowed near the facility. After a period of time, a crowd of civilians begins to gather. You are given the order to disperse the crowd as quickly and safely as possible. The following steps should be followed to disperse the crowd. Steps can be used independently or in conjunction with each other to get the crowd to disperse.

1. Bring in **linguists** assigned to your unit to talk to the crowd and tell them to disperse.
2. Employ **Airborne Speaker Teams** to transmit instructions to the crowd to disperse.
3. Employ **bullhorns** to relay instructions to the crowd to disperse.
4. Use **Loud Noise Speaker Teams** to disperse the crowd.
5. **Honk the horns** of unit vehicles to get the crowd to disperse.
6. Employ **concertina wire** to keep the crowed from gaining access to the area.
7. **Start the vehicle** you have to show the crowd that you will move on them if necessary.
8. Employ **mechanized vehicles** (IAVs) as a show of force to the crowd.
9. Take **pictures** of the instigators of the crowd.
10. Employ **military working dogs** to disperse the crowd.
11. Fix **bayonets**.
12. Conduct procedures used in **Civil Disturbance Drills**.
13. Use **pepper spray** to disperse the crowd.
14. **Show** that you have **CS** canisters.
15. **Use** the **CS** canisters.
16. Employ **helicopter blades wash** to disperse the crowd.
17. **Fire** rounds in the **air**.
18. Employ the use of **deadly force**.

Figure D-3. Example Graduated Response Card

RULES OF INTERACTION

D-94. ROI describe what forms of local civilian contact are allowed and prohibited. ROI may account for local political, religious, other cultural sensitivities; or ROI may be designed to protect US personnel by prohibiting contact with potentially dangerous elements in the local population. ROI support mission accomplishment by maintaining a positive image of US personnel with the local population, and by preventing US forces from being involved in compromising and dangerous situations. ROI may also be used to define appropriate courtesy during interactions with local military and civilian authorities during activities such as compliance inspections conducted during peace operations.

D-95. The ROI applied by the troop is developed by higher headquarters with input from CA, staff judge advocate (SJA), chaplain, counterintelligence, medical, and others. Although the troop commander cannot make the published ROI less restrictive, he may need to impose additional rules to account for local considerations. ROI are tools the individual soldier will need to deal with the nontraditional threats that

are prevalent in stability operations and support operations, including political friction, unfamiliar cultures, and conflicting ideologies. In turn, ROI enhance the soldier's survivability in such situations. They must be tailored to the specific regions, cultures, and/or populations affected by the operation. Like ROE, ROI can be effective only if they are thoroughly rehearsed and understood by every soldier in the unit.

FORCE PROTECTION

D-96. Because of the influence of local politics and news media in stability operations and support operations, precautions and operations required to minimize casualties and collateral damage become particularly important operational considerations during these operations. At the same time, however, force protection must be a constant priority.

D-97. In attempting to limit the level and scope of violence used in stability operations and support operations, leaders must avoid making tactically unsound decisions or exposing the force to unnecessary risks. On the contrary, an overpowering use of force, correctly employed, can reduce subsequent violence or prevent a response from the threat force. This must be covered in the ROE and the OPORD from the troop.

D-98. OPSEC, tempered by restrictions in the ROE and ROI, is an important tool for the commander in accomplishing his force protection goals. Security procedures should encompass the full range of antiterrorist activities for every soldier and leader. Examples include proper communications security; strict noise, light, and litter discipline; proper wear of the uniform; display of the proper demeanor for the situation; as well as effective use of cover and concealment, obstacles, OPs and early warning devices, the protection afforded by armored vehicles, and safe locations for eating and resting.

D-99. A final consideration in force protection is hygiene. Many stability operations and support operations take place in underdeveloped nations. Proper field sanitation and personal hygiene are mandatory if soldiers are to stay healthy.

TASK ORGANIZATION

D-100. Because of the unique requirements of stability operations and support operations, the troop may be augmented to operate with a variety of units. Examples may include infantry, armor, PSYOP, CA, counterintelligence, and or military police.

COMBAT SERVICE SUPPORT CONSIDERATIONS

D-101. The operational environment (infrastructure) of stability operations and support operations may be limited, creating special CSS considerations. These factors include, but are not limited to, the following:

- Reliance on local procurement of certain items.
- Shortages of various critical items, including repair parts, Class IV supply materials, and lubricants.

- Special Class V requirements, such as pepper spray.
- Reliance on bottled water.

MEDIA CONSIDERATIONS

D-102. The presence of the media is a reality that confronts every soldier involved in stability operations and support operations. All leaders and soldiers are subject to instantaneous worldwide scrutiny as a result of the growth of news coverage via international television and radio broadcasts and the Internet. Opposition to the operation, or anti-US personnel may interpret or embellish interviews to imply that the operation counters official US policy and may damage the nation's interests and international standing.

D-103. Soldiers must learn how to deal effectively with broadcast and print reporters and photographers. Training should cover any information restrictions imposed on the media. Soldiers must also gain an understanding of which subjects they are authorized to discuss and which ones they must refer to higher authorities, such as their chain of command or the public affairs office (PAO). PAO personnel usually issue daily guidance dealing with these subjects.

OPERATIONS WITH OUTSIDE AGENCIES

D-104. US Army units may conduct certain stability operations and support operations in coordination with a variety of outside organizations. These include other US armed services or government agencies (see Chapter 6) as well as international organizations, including private voluntary organizations (PVO), such as Doctors Without Borders; NGOs, such as the Red Cross; and UN military forces or agencies.

LEADER REQUIREMENTS

D-105. Flexibility and situational awareness are paramount requirements, especially for the troop commander. The troop's role and/or objectives in stability operations and support operations will not always be clear. The commander will sometimes be called upon to make on-the-spot decisions that could have an immediate, dramatic effect on the strategic or operational situation. Leadership that disregards the will of belligerent parties and the lethality of these groups' weapons compromise the success of their mission and risk the lives of their soldiers.

SOLDIERS' RESPONSIBILITIES

D-106. US soldiers may have extensive contact with HN civilians during stability operations and support operations. As a result, their personal conduct has a significant impact on the opinions, and thus the support, of the local population. As noted, soldiers must understand that misconduct by US forces (even those deployed for only a short time) can damage rapport that took years to develop. US soldiers must treat local civilians and military personnel as personal and professional equals, affording them the appropriate customs and courtesies.

D-107. Every soldier must be updated continuously on changes to operational considerations (such as environment, ROE/ROI, media, and force protection). Such changes can have immediate impact on his freedom to react to a given situation. Keeping the soldier informed of changes enhances his situational awareness and his ability to adapt to

changing conditions. Leaders must disseminate this information quickly and accurately.

D-108. The collection of information is a continuous process, and all information must be reported. Intelligence is provided by many sources, including friendly forces, threat elements, and the local populace. From the friendly standpoint, each soldier must be familiar with the commander's critical information requirements and other applicable intelligence requirements. At the same time, threat soldiers will be continuously seeking intelligence on US actions, often blending easily into the civilian population. US soldiers must be aware of this and use OPSEC procedures at all times.

D-109. To emphasize responsibilities, soldiers and leaders conduct precombat checks (PCC) and precombat inspections (PCI) that focus on soldier's knowledge of the environment and application of ROE, graduated response, and ROI. These checks and inspections should also identify possible OPSEC violations and deficiencies that could place the soldier and his equipment at risk. Leaders should stress that terrorists and thieves may attempt to infiltrate positions or mount vehicles either to steal equipment and supplies or to cause harm to US forces or facilities.

D-110. To enhance civilian cooperation and support, the S2 is responsible for issuing key word and phrase cards (primarily to commanders) to assist in translation of key English phrases into the language of the HN. These phrases should apply specifically to the AO.

EMPLOYMENT CONSIDERATIONS

D-111. The squadron or brigade uses the troop to conduct the various reconnaissance and security missions and augments it with assets from the surveillance troop. Because of the resources necessary to deploy, operate, and sustain forces in stability operations and support operations, the recce troop is used to execute activities that maximize its inherent capabilities of stealth, reconnaissance, surveillance, and HUMINT collection. On the other hand, the factors of METT-TC may require the squadron to execute tasks other than traditional reconnaissance and surveillance. For example, the troop may be tasked with conducting crowd and riot control if a shortage of MPs exists.

SPECIFIC TROOP TASKS

D-112. As part of a force involved in stability operations and support operations, the reconnaissance troop can expect to perform these tasks:

- Security operations, including the following:
  - Area security (refer to Chapter 4 of this publication).
  - Convoy security (refer to Chapter 4 of this publication).
  - Support platoon checkpoints (refer to FM 3-20.98 [FM 17-98]).
  - Roadblocks (refer to FM 3-20.98 [FM 17-98]).
- Reconnaissance operations, including the following:
  - Area reconnaissance with multidimensional aspects (refer to Chapter 3 of this publication).

  - Route reconnaissance (refer to Chapter 3 of this publication).
  - Building searches (refer to FM 3-20.98 [FM 17-98] and to Chapter 7 of this manual).
- Liaison.
- Presence operations.
- Compliance inspections and/or supervise minefield clearance.
- Negotiate.
- Deliver supplies or humanitarian aid.
- React to civil disturbance.
- Plan for and react to a media interview.

NOTE: This is not an all-inclusive list of tasks. The following lists contain information only on the troop task, purpose, and planning considerations for the tasks specified here.

LIAISON

D-113. When conducting stability operations and support operations, the higher headquarters may direct the troop to conduct liaison with many military forces, factional force leaders, government organizations, NGOs, PVOs, and international agencies. Leaders must be in control, dominating, and confident. The commander must be aware of all liaison tasks being conducted in his organization. He should delegate liaison tasks to subordinate leaders and establish an LNO, when capable, and assume responsibility of specific liaison requirements that warrant his level of attention.

D-114. The following is a guide that should be modified to fit individual METT-TC conditions. The majority of the steps are geared toward a stability operation, but are easily applied to all types of operations.

- Troop commander determines liaison requirements for making contact.
  - Determines the need for interpreter. Plans the type of interpreter to be used. Ensures that the interpreter to be used is the right one for the situation. Many times the interpreter is of the opposite factional affiliation and could hinder proper dialog or mood of the liaison. May request interpreter assistance from higher or perhaps request that the agency/individual conducting liaison bring his interpreter for heightened clarification.
  - Identifies military forces, civil authorities, religious leaders, ethnic groups, local factions, and NGOs operating in the area of responsibility (AOR).
  - Conducts IPB of the individuals involved with the liaison. HUMINT collector compiles information on individuals from other liaison HUMINT activities with the identified individuals. Liaison team should know all information about the individual such as likes, dislikes, family information, tobacco user, sports interests, factional

affiliation, and combat experience. Anything that will enhance small talk or knowledge of previous difficulties.

- Determines whom to liaison with and contact frequency for elements in the AOR.
- Establishes times and locations for initial liaison contacts with elements.
- Determines who is the best LNO for a particular contact.
- Determines the need for a quick reaction force (QRF).
- Develops an agenda for liaison meeting(s).
- Plans how to maintain continuous contact until dispute is resolved or tensions are reduced.

- Unit/LNO considerations.
  - Sets the conditions for a professional and cooperative relationship.
    - Ensures uniforms, equipment, appearance, and security procedures are appropriate.
    - Acquires communication and transportation for liaison.
    - Ensures personnel involved know the current political and military situation.
    - Ensures the LNO team understands the mandate, ROI, ROE, graduated response, terms of reference (TOR), and status of forces agreement (SOFA).
  - Upon request, provides liaison assistance in accordance with unit constraints.
    - Establishes an on-call liaison to respond to crises that may develop in the unit AOR.
    - Updates the situation map for current locations of liaison contacts.
  - As required, coordinates with units and/or agencies operating in the unit AOR.
    - Determines what units and or agencies are operating in the unit AOR.
    - Establishes contact at checkpoints, or as specified in the regional force SOP.
    - Exchanges information (military, paramilitary, and mass civilian movements; minefields and obstacles; intentions and missions for belligerents; and locations of key faction force leaders).
  - Determines how to stabilize an area with existing or escalating tension.
    - Identifies potential "hot spots" of increased tension.
    - Determines which factions may be involved and the regions affected.
    - Designates forces to stabilize the area, within capability, or requests additional support.

  - Coordinates with belligerents to resolve real or perceived problems.
  - Reports developments of any destabilizing situation to higher headquarters, as required.
  - Contacts forces or civilians involved.
  - Establishes an upgraded alert status and security awareness of units in affected area and adjacent areas, as needed.
  - Dispatches liaisons to all elements involved.
- Execution.
  - Performs necessary greeting functions, salutations, and exchange of courtesies.
  - Encourages informal small talk among participants while offering refreshments and tobacco products.
  - Discusses the purpose of the meeting, agenda and potential end state.
  - Communicates that only major problems are brought to liaison's headquarters (BCT/squadron commander) attention. (This should be only after subordinates have been unable to resolve the issues; always attempt to power down and to use rank as a means of escalating the liaison situation.)
  - Demonstrates resolve, confidence, commitment, and concern for local customs and people living in the AOR by attending major local events.
  - Implements immediate response to any serious breach of trust, confidence, or deception that has occurred.

CONDUCT PRESENCE OPERATIONS

D-115. The troop conducts presence operations by manning OPs and checkpoints, and conducting presence patrols and reconnaissance patrols, with the intent to be seen. The troop operates on visible routes and locations. It demonstrates tasks with collective determination with actions that are meant to deter belligerent actions and defuse tense situations between belligerents. ROE are strictly adhered to and security of the force is always planned and demonstrated. Professionalism, discipline, and the appearance of combat readiness are projected. The commander ensures the following considerations are followed: backbriefs, confirmation briefs, or attending the troop commander's OPORD briefing or rehearsal are some of the methods available to verify mission understanding.

D-116. The following are planning considerations for conducting presence operations:

- The troop designates a QRF in accordance with METT-TC.
- In coordination with higher headquarters, the troop commander conducts troop-leading procedures.
  - Directs the troop to evaluate terrain.
  - Completes military aspects of the terrain assessment.

- Evaluates and distributes all known information (location, composition, and disposition) on belligerent parties and various factions.
- Evaluates and distributes information on uniforms, markings, insignia, vehicles, and equipment.
- Plots and keeps current, all known locations of weapons holding areas, staging areas, or encampments.
- Evaluates and distributes known information about belligerent faction leaders, and headquarters.
- Identifies headquarters, police stations, barracks locations, political party headquarters.
- Determines locations for liaison for aggressive HUMINT collection to defuse any belligerent activity.

- The troop conducts reconnaissance of potential or anticipated demonstration sites.
  - Within the troop's sector, this includes—
    - Checkpoints.
    - OPs.
    - Routes and main supply routes.
    - Unit compounds, operation bases, or key facilities.
    - Towns or villages in or near zones of separation or within sector.
    - Designated sites by higher headquarters or where information suggests rising tensions.
  - Reconnaissance tasks should include—
    - Routes available and time factors.
    - Potential vehicle and weapon position.
    - Adjacent unit coordination (this may be US or international forces).
    - Casualty evacuation routes and treatment locations.
    - Limited visibility factors considered.
    - Indirect-fire target identification and verification.
- The troop assesses the need for liaison activities and translators.
- The troop maintains radio contact with adjacent units at specified intervals.
- The QRF rehearses all aspects of the mission.
  - Rehearses linkup with all elements that make up demonstration element.
  - Checks internal communications and compatibility.
  - Rehearses movement.
  - Reviews ROE limitations on use of force.
  - Rehearses casualty evacuation, rearmament, and resupply.

- Troop conducts presence operations by conducting OPs, checkpoints, patrols, and inspections.
  - Troop leadership confirms mission plan, ensures personnel are briefed on and know the following before commitment:
    - ROE and use of force.
    - Purpose of operation and desired outcome.
    - Inherent risks of the operation.
    - Graduated response to provocation.
    - Command relationship and controlling headquarters.
    - Authentication procedures for order of fire. (Any unnecessary response may have strategic implications.)
    - Weapon control status and orientation.
  - The element moves rapidly with lights on, UN or appropriate markings and colors prominently displayed.
- The platoons may conduct linkup with area or base camp commanders, other platoon checkpoints/OPs while conducting presence operations.
  - Conduct initial recognition by radio (direct to commander/officer in charge).
  - Conduct face-to-face coordination on arrival.
  - Occupy positions as planned or as directed by the local commander.
- The BCT/squadron receives updates from the troop.
  - Weapon systems are not aimed directly at belligerents, but oriented on their direction.
  - Subordinate leaders are prepared to react proportionally to escalation.
  - Leaders conduct negotiations or liaison, as required, during the presence operation.
  - Troop is prepared to execute the troop's QRF, attack, or defend as necessary within the scope of all applicable directives.

COMPLIANCE INSPECTIONS OPERATIONS

D-117. When intelligence identifies and locates an area to be inspected, such as arms cache inspection, members of an insurgent infrastructure, minefield clearance operation, factional barracks inspection, or any other thing or activity worthy of inspection (usually in accordance with treaty or peace accord), a compliance inspection is conducted to ensure conformity. As with presence operations, the squadron commander normally assigns recce troop(s) this mission.

NOTE: The following planning considerations are the same for squadron and troop level.

Task Organization

D-118. Task organization for a compliance inspection requires the unit to designate a security force to isolate the area to be inspected, a search or reconnaissance force, and a QRF. Special consideration must be made to determine the size of security needed and the QRF to overmatch any possible threat. Augmentation from the brigade can usually provide an effective QRF.

Conduct of the Operation

D-119. An effective security force is critical to the success of the reconnaissance/search effort. The security force isolates the search area, prevents the escape of individuals, and protects the forces conducting the operation. Checkpoints and roadblocks are established along roads entering and exiting the area when necessary. This helps isolate the objective. This may not always be necessary and is dependent on the compliance inspection mission and the threat or potential noncompliance activity. The security force will establish OPs, and (when necessary) security patrols are executed in the surrounding area. Members of the security force orient mainly on people or vehicles attempting to escape or evade the compliance inspection in the populated area; however, the security force can also cut off elements or individuals trying to reinforce threat forces in the search area. Deployment to the search area is rapid and is synchronized so it does not provide early warning to the local population.

D-120. A QRF is located near the compliance inspection. Its specific mission is to reinforce OPs, patrols, or the search force and to assist the other elements as required by the mission.

CONDUCT NEGOTIATIONS

D-121. When the troop is conducting stability operations and support operations it will be called on to negotiate. To conduct effective negotiations, the troop liaison officers of the troop (the troop leadership), in conjunction with local UN/government organizations and civilian/military observers, must establish rapport with local leaders of warring factions and civilians. The troop commander may be directed to renew efforts to conduct negotiations within the area. The factions within the troop's AO may be still engaged in armed conflict. The troop must have guidance from the BCT/squadron that is developed from the peacekeeping mandate, the TOR, SOFA, and ROE that define the desired end state, as well as the limits of concession for the troop.

D-122. The BCT/squadron commander should provide guidance to subordinates based on the peacekeeping mandate, the TOR, SOFA, and the ROE that define the desired end state, as well as the limits of concession.

D-123. The following are planning considerations for the conduct of negotiations.

- The unit prepares to conduct negotiations.
  - BCT/squadron commander ensures unity of effort by forming a negotiation team. The team consists of—
    - Designated team leader (BCT/squadron XO, S3, or troop commander). May or may not be the chief negotiator. Supervises the team's efforts.
    - Negotiation/resource coordinator (troop commander or staff member). Serves as the link to the brigade staff. Procures and requests information. Ensures availability of equipment and materiel necessary to conduct negotiations.
    - Recorder. Maintains chronological record of all conversations between parties and negotiating team. Compiles information in separate lists or databases that indicate demands, deadlines, agreements, or disputes. Maintains a separate listing of all promises made by the negotiating team.
    - Interpreter. An additional interpreter may be required if the accuracy of the primary interpreter is questioned.
  - Negotiating team collects all available information. The team is included in routine message and report flow from the TOC.
    - Identifies the problem or source of contention.
    - Analyzes any previous attempts at resolution and their outcome.
    - Analyzes existing agreements or understandings that may be part of the problem.
    - Knows the constraints and limitations of the squadron's negotiation capabilities.
  - Negotiating team requests or seeks additional information.
    - Makes or issues queries to LNOs.
    - Questions local UN/government organizations and civilian/military observers.
    - Queries are included as specific information requirements (SIR) in reconnaissance and security tasks.
- Team recommends, negotiates, selects meeting place.
  - Ensures meeting place is a neutral location or is acceptable to all parties.
  - Ensures communications assets are adequate for all parties, but especially for the negotiating team.

- Ensures site is surveyed for security requirements. Security elements tasked and positioned to prevent attack or sabotage.
- Ensures availability and use of same map editions and scales by all parties or any other supporting documents that the dispute is concerned with (such as contracts and mine data sheets).
- Coordinates for videotape or other electronic media recording.

- Team arranges meeting place.
  - Organizes tables, chairs, maps, cameras, and coffee (supporting condiments).
  - Designates an area for guards, support personnel, parking, and so forth, to wait.
  - Posts signs or designates locations for various activities.
  - Establishes communications.
  - Establishes and designates break areas.
  - Ensures latrine facilities are adequate.
  - Makes arrangements for negotiation attendees to rapidly pass through security checks.
- Team conducts negotiations.
  - Performs greeting functions, salutations, and exchange of courtesies.
  - Makes formal introductions, by name and position, of all attendees.
  - Encourages informal small talk among participants while offering refreshments.
  - Discusses layout and configuration of site before starting formal portion of meeting.
  - Reviews an agreed upon agenda or establishes one.
  - Allows participants to establish or present their case without interruption.
    - Serves as mediator between multiple parties.
    - Corrects inaccurate information or misrepresentation by the presentation of facts supported by evidence.
    - Does not argue to win a point.
    - Records all positions, opinions, and issues.
    - Avoids making judgments or becoming bogged down with complaints presented by parties. Recorder makes notes for investigation and further actions.
  - Presents the preferred solution (if there is one); otherwise, works to achieve a solution.
    - Isolates what each party desires or what will satisfy them.
    - Identifies a common middle ground.

- Encourages small concessions to get parties in the habit of agreement.
- Uses previous agreements or understandings as a framework for accord (unless those are the basis of contention).
- Facilitates the process by making commitments without exceeding the limits imposed by the mandate or higher headquarters.

- Concludes session at agreed time, or when no further action is possible.
  - Recorder summarizes results of session, acknowledging agreements and concessions made. Reviews issues requiring investigation and tentative agenda for follow-up meetings. If possible, provides written copy of record to participants.
  - Requests copies of other parties' records if they were taking notes.
  - Prepares agreements for signature before parties depart.
  - Ensures clear and positive understanding of any actions agreed on. Fully defines coordination measures.
  - Makes arrangements for future meetings; coordinates dates, times, locations, and means of communication.
  - Speaks pleasantly to each party during their departure, regardless of results of the session.

- Team reports results of negotiation to higher headquarters.
  - Team leader or chief negotiator makes concluding remarks that point out the positive aspects or results of the session.
  - Leader ensures team consolidates all notes and other raw data.
  - Leader uses debrief format to prepare report. In conjunction with recorder, debriefs all team members or other participants (unit personnel or representatives of NGOs and PVOs).
  - Identifies key points or issues that require investigation or immediate attention.
  - Posts and updates chronological logs and information databases.
  - Prepares formal written report listing circumstances, issues, and recommendations.
  - Prepares documents to implement any agreed upon peacekeeping force actions.
  - Prepares information summary to brief troop commanders, brigade commander and staffs, and UN/government organizations, and civilian/military

observers. Considers inclusion of local or regional NGO and PVO.

- Briefs unit public affairs (if augmented) representative on results, publicity issues, or necessity to maintain close hold on results.

- Team begins preparations for subsequent negotiations.
  - Updates and disseminates new information requirements.
  - Updates or creates personality profiles of counterpart negotiating team.
  - Conducts rehearsals to improve negotiating a position or resolving a dispute.

REACT TO CIVIL DISTURBANCE

D-124. While the troop participates in stability operations and support operations, it may be required to assist in the containment of a civil disturbance by itself or as part of a larger unit. By itself, the disturbance may threaten nothing, but the potential for destruction of critical property and the loss of supplies or other assets demands upgraded security measures. The civilians may be unarmed, but if agitated, may use sticks, rocks, and bottles as weapons. However, never underestimate the access to small-arms weapons by noncombatants. Local civil authority usually is insufficient to contain or restrain the civil demonstration or disturbance. This is why the troop may be employed to react to a civil disturbance. Security of the troop is paramount. Soldiers should be armed and equipped with riot control equipment and loaded ammunition is carried (in accordance with ROE).

D-125. The following are planning considerations for the reaction to a civilian disturbance:

- Isolate the area.
  - Establish a perimeter.
  - Erect appropriate barriers.
  - Alert the QRF.
- Establish liaison with local law enforcement authorities.
  - Request local law enforcement authorities to resolve disturbance.
  - Determine the scope and severity of the disturbance.
  - Advise higher headquarters of possible necessity to implement arming orders, and request assistance from other organizations (MPs or UN civil police).
- Key facilities affected by the disturbance identified and prioritized for protection (such as food distribution point, checkpoint, government headquarters).
- Forces apportioned as needed to control disturbance and protect facilities.

- Fixed security posts augmented, while a QRF remains centrally located to respond to threats at other likely targets.
  - Fixed security posts implement rigid entry and exit controls; only one used.
  - Facility occupants moved to interior safe room or escorted out of danger area.
- The unit leader assesses the situation if tasked to exert control over the civilians.
  - Intensity level of the disturbance (crowd mood, composition, activity, perceived intent).
  - Recent trend in local public opinion.
  - Unit capabilities and readiness.
  - Immediate and long-term effects if lethal force is required.
  - Weather, terrain, and time of day.
  - ROE.
- Commander selects or recommends a COA in accordance with the graduated response.
  - Monitor.
  - Contain.
  - Block.
  - Disperse.
- Unit leaders select and employ control formations to best accomplish the task assigned.
- Soldiers respond with strict discipline to orders to help demonstrate firm resolve.
- Soldiers resist provocation and deliberate attempts to humiliate them.
- Leaders consider rotation scheme for soldiers in perimeter, especially those closest to civilians.
- Commander uses all available resources to help reduce tensions.
  - PSYOP assets are used for recording unlawful activities, communicating to crowd, identifying covert direction or leadership.
  - CA assets are used to aid in communication and liaison.
  - PVO and other NGOs identify the real cause of the disturbance and potential means to end confrontation.
- Soldiers are required to review rules for use of lethal force before employment in the perimeter.
  - Brigade or squadron commander may add or delete restrictions to the ROE.
  - Soldiers must be able to react immediately to every threat. (Commander must war-game every considerable action of the crowd or hostile individuals.)

- Soldiers rehearse all physical restraint options to be used in escalating situation before the use of deadly force before assuming duties on the perimeter. Adhere to the graduated response.
- Leaders ensure that soldiers on the perimeter can hear orders, and soldiers are kept informed of the situation.

- Apprehension and detention of civilians are consistent with specific guidance issued for the current operation.
  - Apprehension and detention limited to serious offenses involving death or injury, or property theft or destruction.
  - Personnel searches are conducted to check for weapons or evidence.
- Leader considers use of patrols and visible mobile checkpoints after cessation of the disturbance to assist the resumption of control by the local civil authorities.
- Leader uses video equipment to tape the disturbance and unit's actions to document accuracy of activities and preclude incorrect reporting of force response.

PLAN FOR AND REACT TO A MEDIA INTERVIEW

D-126. The troop will usually be faced with media events within stability operations and support operations. This will be a leader, individual, or unit event. The troop must be prepared to face such events and the troop commander must ensure each soldier is prepared to react in accordance with unit SOP and ROI. The troop and its soldiers may be approached for an interview, which may or may not be justified, by media representatives who appear to be legitimate. The response the troop gives the media has the potential to cause international effects. Care must be given in response to the media. All interviews will not materially affect the unit's or a soldier's ability to conduct his assigned tasks. These are a few guidelines to react to media:

- Interviews are not conducted with non-accredited media representatives.
- Unit public affairs representative provides guidance to both interviewer and soldier to be interviewed.
- Soldier interviewed does not speculate, nor does he express opinions beyond the scope of his experience or duties.
- Operational information is not discussed.
- Troop adheres to the ROE and ROI.

D-127. The following are planning considerations for the reaction to a media interview.

- Soldier asks to see accreditation certification. (The PAO at brigade, division, or ARFOR provides authorization paperwork or escort.)
- Soldier asks where the escort is if reporter appears to be unescorted.
- If all details are in accordance with instructions received from briefings, soldier participates in the interview.

- Unit public affairs representative should remain nearby during the interview.
- Soldier responds to interviewer's questions.
  - Listens to the question and asks for clarification if needed.
  - Thinks about answer before responding.
  - Is honest in replies; says "I don't know" if answer is beyond scope.
  - Explains if he cannot answer a question due to OPSEC.
  - Does not respond to hypothetical situations used by correspondent to elicit a response.
  - Terminates interview if he becomes uncomfortable with the questions being asked, or if questioning becomes provocative.
  - Does not allow himself to be "baited" into a response by a controversial or so-called "investigative reporter."
  - Avoids saying "No comment."
- If press representative is unescorted, soldier—
  - Determines if escort is in the area. Asks for a specific name and unit rather than accepting a general wave "over there."
  - Requests person or team to accompany the reporter to headquarters element location, or calls for superiors to come to the location.
  - Uses tact in dealing with media team.
- Leader attempts to verify identity of media team.
  - Notifies BCT/squadron's public affairs representative or PAO.
  - Advises media team to depart AO and to make contact with higher headquarters unit public affairs representative or PAO. Provides location and recommends route.
- If media team is in an area under direct US force control (for example, compound, protected area, buffer zone), soldier detains them to maintain positive control.
  - Informs media team that they are in a controlled area.
  - Informs media team that detention is for security reasons and will continue until released by higher headquarters.
  - Uses restraint consistent with authorized methods.
  - Leader considers that a ploy may be engineered to portray US force unfavorably.
  - Keeps higher headquarters informed of all actions taken.

DELIVER SUPPLIES OR HUMANITARIAN ASSISTANCE

D-128. The troop may be called upon to escort transportation of humanitarian supplies to a location that supports a variety of situations.

Some of these situations may be food for civilians, medicine for refugee center/hospital, election materials, and utility equipment, just to name a few. The troop must measure the importance of the mission, the threat situation (what may try to interfere with the mission), task organization, and the consequence of failure (media reaction, loss of life) in accomplishing the mission. Many times the mission can be delayed until the situation is less threatening. The amount of supplies and level of threat will determine if the mission is a troop- or squadron-level mission. The following are guidelines for achieving success in such a mission:

- Reconnaissance force (quartering party/security force at the delivery site), security force for the convoy, and QRF.
- Delivery is completed without incident.
- Accountability is maintained and receipt is acknowledged.
- The unit adheres to the ROE.

D-129. The commander confirms the mission and intent from higher for the humanitarian assistance; does necessary coordination with government organizations/NGOs that are concerned with the mission; and establishes a reconnaissance force to reconnoiter the route and the delivery site (liaison with delivery site officials, evaluates the security of the site, establishes security of the site). Once complete, the reconnaissance force may become the overall security force. The commander establishes the convoy security force to organize the convoy security mission; and establishes a QRF to respond to chance contact by the convoy. The following are other planning considerations for the execution of the delivery of humanitarian assistance/supplies.

- The convoy halts in a covered, concealed site short of the delivery destination.
- The convoy commander confirms the location for delivery.
- The commander conducts liaison with authorities for drop-off point.
- The commander organizes the unit to maintain security during delivery.
  - Security elements posted at intersections or choke points en route from the halt site to the delivery site.
  - Security element posted at delivery site; wire emplaced as necessary.
  - Security maintained at halt site.
- Supply vehicles move in manageable numbers (dependent on off-load timing) to delivery site.
  - En route security or QRF prevents diversion of vehicles.
  - Site security prevents infiltration and attempts to loot.
  - QRF prepared to respond to events at delivery site.
- The commander ensures relief organization or local authority acknowledges receipt of supplies.
- Security collapses onto and around the delivery site when all vehicles complete unloading. The unit may set up area

security with subordinate elements/platoons conducting screen, reconnaissance, defensive, and QRF missions.

- Security remains on site until local authorities assume control or distribution is completed.
- The convoy commander reports mission complete to higher headquarters.

SUPERVISE MINEFIELD CLEARANCE

D-130. While the troop conducts stability operations and support operations, it may be required to supervise other agencies (NGOs, local military, contractors) in the clearance of a minefield by itself or as part of a larger unit. The minefield may threaten ongoing operations by relief workers and pose a threat to the local populace. In many cases, those tasked to clear minefields may be open to harassment or assault by local factions or may be prone to doing an inadequate job of clearing the minefield. In all cases, clearing of minefields demands upgraded security measures. Local civil authority usually is insufficient or ill trained to supervise the minefield clearance. This is why the squadron may be employed to provide supervision to other agencies clearing minefields. Security of the units conducting supervision is paramount. Soldiers should be armed and equipped with riot control equipment and loaded ammunition is carried (in accordance with ROE). The unit conducting this operation will be augmented with engineers who are responsible for the direct supervision of the minefield clearance. Units will assist the engineers by supervising the overall operation and providing security around the minefield. Additionally, a medical unit will provide support to the operation.

D-131. The following are planning considerations for supervision of minefield clearance:

- Isolate the area.
  - Establish a perimeter.
  - Erect appropriate barriers.
  - Alert the QRF.
- Establish liaison with attached engineers and medical personnel.
  - Review the plan for movement to, isolation, and security of the area.
  - Review the plan for the minefield clearance.
  - Develop a sketch or overlay of the area and designate required control measures.
  - Develop a detailed sketch of the clearance organization, who leads, where the engineers will locate, where the troop elements will locate, etc.
  - Determine how disarmed mines will be transported out of the area.
  - Determine actions to be taken in the case of an accidental explosion.

- Establish liaison with local law enforcement authorities.
  - Request local law enforcement authorities to assist with isolating the area.
  - Brief them on the plan for the minefield clearance.
- Establish liaison with the agency/unit conducting the clearance.
  - Review their plan for the clearing operation with the attached engineers.
  - Ensure that they are fully aware of the security plan for the area and know whom to contact prior to moving around the area.
- Nearby facilities affected by the minefield location are identified and occupants are notified of the potential for damage in the case of an explosion.
- Forces are apportioned, as needed, to isolate the area and supervise the operation.
- The unit leader assesses the situation and determines if the operation can proceed.
  - Is the area isolated adequately?
  - Does the recent trend in local public opinion and activities threaten the operation?
  - Is the clearing agency or unit capable and ready to conduct the operation?
  - What are potential immediate and long-term effects if an accident happens?
  - Do the weather, terrain, and time of day support the successful execution of the operation?
  - Review the ROE as necessary.
- Commander uses all available resources to help reduce the potential for disruption to the operation.
  - PSYOP assets are used for recording unlawful activities, communicating to crowds, identification of covert direction or leadership.
  - CA assets are used to aid in communication and liaison.
- Leader uses video equipment to tape the operation and the unit's actions to document accuracy of activities and preclude incorrect reporting of force activities.

Appendix E

Deployment

CONTENTS

Unit Movement Officer E-1
Unit Load Teams..... E-2
Hazardous Cargo Certification E-2
Vehicle Preparation E-3

The troop must be prepared to deploy anywhere in the world on short notice. Although higher headquarters is responsible for many components of deployment planning and coordination, the troop also requires proficiency in rail, ground, air, and sea deployment operations. The troop commander must ensure that all personnel are trained and prepared for deployment. He must also ensure that certain key individuals or elements in the unit are properly trained to carry out special deployment tasks. This appendix lists those who require special training and describes some of the skills that they must learn.

Key references to support the troop commander's deployment preparations are FM 4-01 [FM 55-1], FM 4-01.1 [FM 55-9], and FM 4-01.15 [FM 55-15]. This appendix also identifies other deployment-related references and points of contact.

SECTION I – UNIT MOVEMENT OFFICER

E-1. Army policy requires that the troop have a unit movement officer (UMO), E6 and above, and an alternate appointed on orders. They must be trained by the troop or a service school and be thoroughly familiar with the following:

- The contents of this appendix.
- US Air Force/US Army airlift operations.
- The roles and duties of the UMO and unit movement coordinator (UMC).
- The transportability of the troop's organic equipment.
- The characteristics and capabilities of the types of vessels, aircraft, or railcars the unit may use to deploy.
- Highway, rail, and port operations.

E-2. Formal training for the troop commander, UMO, and NCO in unit deployment is available through the Joint Strategic Deployment Training Center (JSDTC). JSDTC offers resident courses, to include the following:

- Air Deployment Planning Course (Air Mobility Command [AMC] certified).
- Unit Movement Officer Deployment Planning Course.

- Strategic Deployment Planning Course.
- Transportation Coordinator – Automated Command and Control Information System (TC-ACCIS).
- Mobilization Deployment Planning Course.

E-3. JSDTC also conducts mobile training team activities on request. To obtain information on course offerings, mobile training teams, and related doctrine, contact JSDTC, ATTN: ATSP-TDJ, Fort Eustis, VA 23604-5363 or call DSN 927-2039 or commercial (757) 878-2039.

E-4. The Army Reserve Training Center (DSN 280-7277 or commercial (608) 388-7277) conducts the Unit Movement Officer Deployment Planning Course and the Mobilization Deployment Planning Course.

SECTION II – UNIT LOAD TEAMS

E-5. The troop must have an appropriate number of personnel trained on vehicle preparation and aircraft and rail loading and unloading techniques. The troop commander should consider designating and training as unit load teams one squad per platoon. This training will include the following:

- Preparation of vehicle load plans.
- Preparation of vehicles for shipment by reducing operational dimensions, protecting fragile components such as windshields and mirrors, and weighing and marking procedures for air and rail modes.
- Tie-down procedures for vehicles, aircraft, and railcars.
- Operation of troop vehicles in conditions simulating loading and unloading techniques for aircraft and rail.

SECTION III – HAZARDOUS CARGO CERTIFICATION

E-6. When the troop is preparing, packing, and marking equipment for movement and deployment, special certification is required to ensure personnel follow safety procedures according to AFJM 24-204 or Code of Federal Regulations (CFR) 49. Improper procedures could cause loss of life or equipment. Because the troop has air transportable equipment, it should have at least one school-certified person to certify hazardous cargo. AR 55-355 gives information on formal certification. Hazardous cargo certification teams visit most installations annually or semiannually. (Consult the installation transportation office for scheduling details.) Regardless of whether or not the troop has anyone who is school qualified, the UMO/NCO should be familiar with the contents of AFJM 24-204 and CFR 49. Military Standard (MIL-STD)-129J and DA Pam 740-1 contain additional packing assistance.

SECTION IV – VEHICLE PREPARATION

E-7. Efficient equipment preparation for movement is a troop responsibility. Troop personnel reduce vehicles according to mode of transportation and the carrier's additional instruction. Transportation personnel may further reduce vehicles so they will fit into cargo areas whose particularly low overhead clearance may demand maximum reduction. This section describes procedures for reduction of unit vehicles.

EFFICIENT CARGO PREPARATION

E-8. Efficiently preparing cargo saves valuable cargo space aboard vessels and aircraft. Other advantages are greater integrity of unit equipment, less cargo handling, less chance for troop equipment to become delayed or lost, and significant cost savings.

E-9. Built-up vehicles will not be transported on vessels or commercial conveyances without Major Command (MACOM) approval. These types of vehicles typically have overhead clearance problems along rail lines and in vessel compartments. When built-up vehicles are permitted, for example, a temporary substitute for a TOE-authorized shelter, the new dimensions must be entered on the automated unit equipment list (AUEL). When mounted on a vehicle, the built-up shelter height must not exceed the height of the authorized shelter. Authorized shelter heights are designed to accommodate both the vehicles vertical balance and overhead clearance on selected transportation modes.

VEHICLE REDUCTION STANDARDS

E-10. Prepare troop cargo (vehicles and equipment) for shipment according to the mode of transportation and the type of move. If the troop moves organically, it moves vehicles in an operationally reduced configuration, such as mirrors mounted and windshields up. Reduce loads according to Technical Bulletin (TB) 55-46-1 and the movement order. Further reduction specified by the movement order occurs in the port of embarkation staging area. Reserve component units that convoy to a mobilization station before deployment will maximize use of their organic cargo capacity by reducing loads for the deployment at the mobilization station. Depending on the strategic lift asset for deployment, full reduction may or may not be required.

E-11. Make every effort to support the commander's concept of operations. When preparing vehicles for shipment, unit personnel must be sure that equipment conforms to clearance and space restrictions. Personnel must do the following:

- Reduce vehicle length and width by folding in side-mounted mirrors and removing storage baskets that overhang the vehicle's fixed dimensions.
- Remove antennas.
- Keep windshields and cab canvas in the up position.
- Leave exhaust stacks in place.
- Reduce height as needed for rail clearance. Check with the installation transportation office.
- Reduce the length, width, and height of the vehicle only when specified in the movement order.

PREPARATION OF VEHICLES

E-12. Take the following steps to prepare troop vehicles:

- Thoroughly clean the vehicle.
- Ensure the vehicle is mechanically sound, free of leaks, drips, and other operational defects.
- Fill fuel tanks only to three-quarters of capacity. Any additional fuel increases the chance for spillage. Do not put hazardous labels or placards on vehicles for fuel in the tanks.
- Do not fill trailer-mounted equipment containing combustion engines, such as generator sets, to more than one-half of their fuel capacity.
- Ship 5-gallon fuel cans three-quarters full of diesel fuel if they are shipped in approved vehicle storage racks. Inspect fuel cans for serviceable lid gaskets, leaks, and other defects prohibiting their use as fuel containers.
- Do not leave removable crew-served weapons, such as spare barrels and other sensitive items, mounted or stored in the vehicle. Instead, consolidate them and place in a secure container. Seal the container and lock it with an appropriate locking device.
- Equip all vehicles with serviceable and proper lifting/tie-down devices or shackles. Remove T-hooks from combat vehicles and replace them with screw pin shackles.
- Secure ignition keys to the steering wheel with wire. The wire must be long enough to reach the ignition. Give copies of container keys to the unit liaison team or supercargoes accompanying the cargo.
- Do not cover headlights, windshields, or mirrors with tape.
- Ensure fire extinguishers are in the approved mounting bracket if they are kept with vehicles during shipment.
- Keep driver compartments and steering wheels unlocked.
- To preclude moisture damage to radios, store them in secured containers. If radios are shipped mounted in the vehicles, secure them with a padlock and chain; then cover them with plastic. Treat COMSEC equipment as classified cargo.

E-13. If required for height reduction, lower canvas cab tops. Remove and box the frames for the cab canvas. Stow them only in the front cab of their respective vehicles. Keep the canvas threaded through the top windshield channel. Fold down the windshield with the canvas wrapped over the windshield and secure with manila rope. The method and degree of protection are left to the unit commander's discretion.

E-14. If removing exhaust stack extensions, protect the opening from weather and debris when the vehicle is not in operation. Use a tin can large enough to fit over the bottom exhaust stack pipe. Attach a wire to the can and exhaust stack bracket so the can may be removed and not lost when the vehicle is in operation. Place a shoe tag on the ignition switch or steering wheel to remind the operator to remove and install the can as appropriate.

E-15. When nesting equipment or placing cargo into unit vehicles, adhere to the following guidelines:

- Maximize use of all vehicles cargo capacity, particularly cargo vehicles and trailers. If a trailer is nested in the back of a cargo truck, load cargo under and around the trailer.
- Do not exceed the payload capacity.
- Securely restrain the equipment and cargo in the vehicle body or chassis.
- Ensure there is no metal-to-metal contact of loaded cargo. For example, a container loaded in the bed of a 5-ton cargo truck must have plywood between its bottom and the metal cargo bed.
- After loading cargo into the cargo bed, cover it with canvas. Secure the canvas by lashing with manila rope. If steel strapping must be used, use enough padding to prevent damage to the canvas.
- Update the AUEL if cargo loaded in a vehicle increases the dimensions or adds vehicle weight.
- Box on-vehicle equipment (OVE) and remove parts when practical. Store them aboard the vehicle for easy access at the port of debarkation. The OVE can be secured best in the vehicle OVE box. Lock or band the box itself. Store OVE and parts in the vehicle cab or under seat compartments (as long as seats can be secured), or place OVE and parts into boxes or small crates and place the crates in the cargo bed. Mark boxes or crates with the vehicle's unit identification code (UIC).
- Stow acetylene and oxygen tanks on a separate wooden pallet. Label tanks according to CFR 49 and clearly mark with the prime mover UIC.

Appendix F

Command Post Operations

CONTENTS

Command Post Activities F-1
CP Responsibilities F-1
Continuous Operations F-3
CP Positioning F-4
Enhancing CP Security F-4
Displacing the CP F-5
CP Battle Drills F-5
Communications Architecture F-6
Communication Responsibilities F-7
Means of Communication F-8
Internal Communications F-9
Communications Security F-10
SOP Considerations F-11
FBCB2 Filter Settings F-11
Threat Reporting F-12
Standardized Reports F-12
Charts and Status Boards F-12
Filing Systems and Naming Conventions F-16
Color Standards F-17
Graphics and Orders F-17
Integrating Digital and Nondigital Units F-17
Required Supplies F-18

The troop CP assists the troop commander in controlling current operations and planning. The troop CP is austere in comparison to higher echelon CPs, and it cannot integrate combat support, plan future operations, or perform other functions associated with more robust CPs. However, the troop CP can assist the commander by maintaining communications with higher headquarters, adjacent units, and subordinate elements. It can also develop and submit routine and recurring reports to higher headquarters. The troop CP can assist the commander during planning by performing tasks such as analyzing portions of the higher headquarters order or developing specific parts of the troop plan. The CP is usually composed of HMMWVs equipped with communications equipment and FBCB2. It is the net control station (NCS) for the troop command net and monitors the brigade/squadron command, OI, and CSS nets. It may also operate on the division HF net. This appendix provides specific TTPs for operating, securing, and moving the CP.

SECTION I – COMMAND POST ACTIVITIES

COMMAND POST RESPONSIBILITIES

F-1. The reconnaissance troop CP personnel assist the commander in the coordination and supervision of the execution of plans, operations, and other activities. One of the primary functions of the troop CP is collecting combat information from the platoons and reporting significant threat information gathered during their reconnaissance and surveillance activities to the higher main CP. The overall CP responsibilities are:

- Assist the commander in command and control.
- Maintain current operations map. Digital units maintain the following FBCB2 map chart tabs consisting of set map areas,

static (notional) overlays, and CP (dynamic) overlays with associated CP filters.
  - OPNS/RECON - track and fight the reconnaissance/ counterreconnaissance battle.
  - HIGHER OPS - track and fight the current battle.
  - CLR FIRES - clear artillery fires.
  - REAR (CSS) - track the activity in the rear area.
- Maintain situational awareness through the following information:
  - Unit locations:
    - Own platoons.
    - Flank units.
    - Unit and higher trains.
    - Higher headquarters CPs.
  - Current graphics.
  - Unit status:
    - Maintenance.
    - Logistics.
    - Personnel.
  - Artillery targets (list and overlay).
  - Obstacles (locations and overlay).
  - Known/templated threat locations.
  - Commander's critical information requirements listed by:
    - Priority intelligence requirements (PIR).
    - Essential elements of friendly information (EEFI).
    - Friendly forces information requirements (FFIR).
  - Current mission statement and intent:
    - Own.
    - Higher.
- Serve as the troop's NCS.
- Report information to higher headquarters and adjacent units.
- Maintain a log of all incoming and outgoing messages on DA Form 1594.
- Monitor and coordinate CSS for the troop and attached elements.
- Answer all calls from higher unless directed specifically to the commander. Respond for the commander when he does not answer.
- Act as a middleman for any calls directed to a unit or within a unit.
- Conduct PMCS on all equipment.
- Ensure vehicles are loaded and secured in accordance with approved load plans.

CONTINUOUS OPERATIONS

F-2. The troop CP must be capable of operating on a 24-hour basis. During continuous operations the troop CP normally operates in shifts; however, the importance of the XO as the troop second in command must be accounted for when establishing shifts. The shifts should be established to provide a depth of experience across all shifts. The CP operates under the direction of the XO, and is manned by:

- The XO.
- Operations NCO.
- Communications NCO.
- NBC NCO.
- HUMINT NCO (RSTA troops only).
- Two driver/radio-telephone operators (RTO).

F-3. An example of CP shifts is as follows:

- Shift 1:
  - XO (may need to divide his time between both shifts).
  - Communications NCO.
  - HUMINT NCO (if assigned).
  - RTO.
- Shift 2:
  - Operations NCO.
  - NBC NCO.
  - RTO.

F-4. To ensure continuous, uninterrupted operations, the CP personnel conduct a shift change briefing to educate the incoming shift on the current status of the troop, the flank units, and the higher unit. Both shifts review the significant activities during the previous shift to familiarize the oncoming shift with upcoming decisions and events. While the format for the brief is a matter of SOP, it should address the following:

- Task organization changes (FBCB2 task organization file in effect).
- Changes to mission (current FRAGO in effect).
- Current CCIR and answers to CCIR received during previous shift.
- Current threat situation.
- Current platoon and attached element status.
  - Maintenance.
  - Logistics.
  - Personnel.
- Current friendly situation (two levels higher).
- Significant activities (threat and friendly) during previous shift.
- Activities scheduled during the next shift (timeline).
- Unresolved actions.
- Current communications status.
- CP priorities of work.

- Locations of:
  - Troop commander.
  - 1SG and trains.
  - Brigade/squadron commander.
  - Mortars.
  - FIST/COLTs.
  - GSRs.
  - IREMBASS.
  - UAVs (flight plans).
  - HUMINT platoons (operating in troop AO).

COMMAND POST POSITIONING

F-5. When planning an operation, the commander, XO, and operations NCO develop a plan that addresses the initial and subsequent positioning of the CP. The movement and positioning of the CP should be integrated into the troop war gaming and rehearsals. The CP is positioned where it can best balance the need for security and self-protection with the requirements to maintain both digital and FM communications. This may require a centralized position during noncontiguous operations. Conversely during linear operations, the CP may be positioned well forward and prepared to move frequently in support of mobile operations. Regardless, the CP should not be set up along likely threat avenues of approach and will displace as necessary to ensure survivability and continuous communications.

F-6. The general guidelines for planning the positioning of the CP are:

- During reconnaissance or offensive operations, the CP should remain at least one terrain feature behind the troop combat elements, positioned to maintain communications with the platoons and the controlling higher CP (TAC CP or main CP).
- During security or defensive operations, the CP should be positioned in sufficient depth to avoid contact with the threat while maintaining communications with the forward scout sections.

F-7. When conducting a reconnaissance for CP locations, consider towns and built-up areas, reverse slopes of hills, or a position that provides good communications. The proposed CP location must be away from crossroads, hilltops, and other prominent terrain features and have—

- Communications with higher and subordinate units.
- Cover and concealment.
- Firm and level ground with good drainage.

ENHANCING COMMAND POST SECURITY

F-8. CPs must secure themselves against a wide range of threats, to include conventional attacks by mounted or dismounted forces, artillery and air attack, electronic attack, terrorist threats, or NBC attacks, including weapons of mass destruction. The CP relies primarily on passive measures to avoid detection, but must have SOPs to react to

contact if located. Consider the following OPSEC/INFOSEC measures when positioning the CP:

- Do not erect signs advertising the CP's location.
- Maintain noise and light discipline.
- Limit traffic in and out of CP.
- Use a LP/OP and/or conduct local security patrols.
- Establish fighting positions for CP personnel and maintain a 360-degree perimeter.
- Rehearse execution of the perimeter defense.
- Disseminate near and far recognition signals to all subordinate elements.
- Designate a rally point and/or an alternate CP location in the event of artillery or air attack.
- Position vehicles in covered and concealed locations.
- Ensure vehicle and equipment are camouflaged and generators are muffled.
- In smaller-scale contingencies or stability operations, obtain a threat vulnerability assessment if the CP is occupying a permanent location or base camp.

DISPLACING THE COMMAND POST

F-9. While the CP normally controls operations from a static position, it may be forced to move during an operation. The troop's SOP should cover techniques for the handover of control during CP displacement. These techniques can range from the troop commander conducting C2 to the XO's vehicle jumping to the next location and assuming C2 duties while the CP displaces to join the XO.

F-10. The CP must conduct a battle update with the troop prior to displacement. All troop C2 elements (commander, XO, 1SG, platoon leaders) should eavesdrop on the appropriate command nets while the CP displaces. During movement, messages to the CP should be minimized. This will require that the CP notify all stations of its planned displacement. It may require a reconfiguration of FBCB2 auto-send and auto-forward functions to route messages to the next higher echelon during displacement.

COMMAND POST BATTLE DRILLS

F-11. The troop CP must be able to react to a variety of situations during operations. The specific actions taken by the CP should be well defined in the troop SOP and rehearsed during training. Typical battle drills are—

- **Threat air attack.** The CP will not engage threat aircraft except in self-defense. The shift leader will direct M240 and M2 fire; the CP personnel not manning weapons will assume security positions and engage with small arms.
- **Threat ground attack.** Engage dismounted threat immediately and then send SPOTREPs to the troop and higher CP. The shift leader designates a rally point for the

security force to meet and conducts actions to defeat the threat. AT-4 fires will be directed in volleys against threat vehicles. M240 and M2 will fire as directed to destroy the threat. CP personnel not manning weapons will assume security positions and engage with small arms.

- **NBC attack.** Personnel don their protective masks and assume MOPP 4 upon hearing the M8A1 chemical alarm or other alert determined by the troop SOP. The shift leader ensures that all personnel have initiated MOPP 4. He then supervises the execution of M256 kit testing and unmasking procedures.
- **Indirect fire attack.** The shift leader directs the CP to displace to a rally point or alternate location. Control of the battle is transferred to the troop commander. Vehicles evacuate the CP as soon as antennas are detached. The 1SG or another element will return to police up any abandoned equipment.
- **Electronic counter-countermeasures (ECCM).** The CP RTO or shift leader will determine if one or more radio nets have been compromised or a target of electronic countermeasures (ECM). The CP will initiate troubleshooting procedures and inform the commander, subordinates, and higher CPs. If troubleshooting procedures fail to correct the communications problem, the shift leader initiates ECCM procedures:
  - The shift leader announces the ECCM code word over the jammed net and all operators switch to the alternate net.
  - The CP reestablishes communications with all stations.
  - The CP forwards a meaconing, intrusion, jamming and interference (MIJI) report to the higher CP.

SECTION II – COMMUNICATIONS ARCHITECTURE

F-12. Fundamental to C2 is the reporting of combat information and orders. A robust FM voice and digital communications network that can transmit over extended battlespace is essential for successful operations. Communications is easily interrupted by obstructions to line of sight (LOS), other systems operating in the same electromagnetic spectrum, atmospheric conditions, and threat electronic attack. Planning for successful communications is increasingly complex and requires detailed actions, such as:

- Conduct a detailed communications LOS analysis (a communications MCOO).
- Establish redundant means of communications.
- Ensure subordinates understand the commander's intent so they know what to do if communications are lost.
- Plan communications architectures in detail, including the use of retransmission, digital network linkages, and C2 node placement.
- Define the initial task organization and expected changes in order to establish and maintain FBCB2 conductivity.

- Follow proper signal and communications security procedures.
- Keep digital orders, overlays, and messages concise to avoid overloading the FBCB2 system.
- Establish SOPs that define when and what communications will be transmitted digitally and which will be transmitted by FM.
- Establish alternate communications procedures.

COMMUNICATION RESPONSIBILITIES

F-13. The traditional responsibilities for establishing communications (higher to lower, supporting to supported, reinforcing to reinforced, left to right, etc.) remain valid. With many digital communications systems, however, all participants have roles that must be executed to establish and maintain communications. The fundamental rule is that all soldiers have a responsibility to establish and maintain communications. The traditional responsibilities are the following:

- **Senior to subordinate.** A senior unit is responsible for establishing communications with a subordinate unit. An attached unit of any size is considered subordinate to the command to which it is attached.
- **Supporting to supported.** A supporting unit is responsible for establishing communications with the supported unit.
- **Reinforcing to reinforced.** A reinforcing unit is responsible for establishing communications with the reinforced unit.
- **Passing to stationary.** This occurs during a forward passage of lines, with the passing unit responsible for establishing communications with the stationary unit.
- **Stationary to passing.** This occurs during a rearward passage of lines, with the stationary unit responsible for establishing communications with the passing unit.
- **Lateral communications.** Responsibility for establishing communications between adjacent units may be fixed by the next higher commander or SOP. If responsibility is not fixed by orders, the commander of the unit on the left is responsible for establishing communications with the unit on the right. The commander of a unit positioned behind another unit establishes communications with the forward unit.
- **Restoration.** Regardless of the responsibility, all units take prompt action to restore lost communications.

MEANS OF COMMUNICATION

F-14. Reconnaissance troops use the full spectrum of communications means. Planning data for communications systems and sensors that support the troop can be found in Table F-1. The troop has access to the following means of communications:

- **Digital.** FBCB2 is the digital system that links the troop to the brigade/squadron's Army Battle Command System (ABCS). The ABCS is a network of computer systems that allow for advanced reporting, orders and graphic sharing, and database management.
- **Radio FM communications.** Operations normally depend on radio as the primary means of communication for both voice and digital traffic. Net discipline and SOP minimize needless traffic. To avoid detection by threat direction-finding equipment, CP uses all other means of communication to supplement the radio and minimize emissions. Once in contact, the primary means of communication will be FM voice. Radio communications include electromagnetic communications in FM, AM, UHF, and VHF spectrums.
- **Tactical satellite (TACSAT) radio communications.** Reconnaissance operations are often conducted across vast distances. This necessitates the need for extended ranges. TACSAT radios have unlimited range so they can fulfill this requirement.
- **Commercial lines.** Commercial lines are used when approved by higher headquarters. Careful consideration must be given to securing commercial lines and limiting classified material sent over nonsecured lines. If the unit is forced to withdraw, existing wire lines, including commercial lines, are cut and sections removed so the threat cannot use them.
- **Sound and visual.** Sound and visual signals are in the SOI or the troop SOP. Signals not included in the SOI may be established by SOP or in the OPORD. The battlefield will have many sound and visual cues that become increasingly important in complex and urban terrain. Commanders and key leaders carefully determine how sound and visual signals will be used and authenticated. Sound and visual signals include pyrotechnics, hand-and-arm, flag, metal-on-metal, rifle shot, whistles, and bells.
- **Messengers and liaison officers.** Messengers are used between the CP, trains, and higher and lower headquarters. Liaisons are sent to higher headquarters to speed the passage of information between CPs. The use of LNOs becomes increasingly important as digitally-equipped units operated with nondigitally-equipped units.
- **Wire.** Wire is normally used for internal communications within the CP, support areas, and assembly areas. It is the primary means of communication whenever the situation permits.

INTERNAL COMMUNICATIONS

F-15. The troop operates on its internal nets described below:

- **Troop command net.** The command net is a secure FM net, controlled by the troop CP. It is used to command and control the troop. All organic and attached units and FIST/COLT operate in this net. The command net is used to send combat critical information to the commander and to allow platoon, supporting leaders, and the troop commander to talk to each other.
- **Brigade/squadron command net.** The command net is a secure FM net, controlled by the S3 section at the main CP. It is used to command and control the squadron/brigade. All organic and attached units, FSO, ALO, and supporting units operate in this net. The command net is used to send combat critical information to the commander or the S3 and to allow subordinate commanders and the brigade/squadron commander to talk to each other.
- **Brigade/squadron operations and intelligence net.** The OI net is a secure FM net, controlled by the S2 section of the main CP. All routine tactical reports and other intelligence matters are sent on this net. This net should be used to free the command net for command and combat critical traffic. The troop and subordinate S2s are users of this net.
- **Brigade/squadron administrative and logistics net.** The A/L net is a secure FM net, controlled by the S4 section in the rear CP. This net is used for A/L reports and coordinating logistics and rear area security operations. The forward support battalion (FSB), subordinate battalion S1/S4s, and attached 1SGs operate on the A/L net. The troop CP monitors this net.
- **Brigade/squadron fire control net.** The fire support net is an FM and digital net controlled by the fire support element (FSE) in the main CP. It is the primary means of calling for indirect fires or close air support for the brigade. Battalion FSEs, troop FIST, the main CP, command group, TAC CP, and supporting artillery units are users of this net.

Table F-1. Communications System Planning Data

Short Name	Full Name	Planning Range (Voice)	Planning Range (Data)*	Freq Band	Freq Range	Low Data Rate	High Data Rate	Line of Sight	TAC SAT	GPS	Note
EPLRS	Enhanced Position Location Reporting System		3-10 km	UHF	420-240 MHz	14400 bps	100+ kbps	Yes		Yes	Primary means of FBCB2 data transmission
SINCGARS	Single-Channel Ground and Airborne Radio System			VHF	30-87.975 MHz	1800 bps		Yes			Secondary means of FBCB2 data transmission
	Manpack	5-10 km	1-10 km								
	Short Range Vehicular	5-10 km	1-10 km								
	Long Range Vehicular	10-40 km	3-35 km								
NTDR	Near Term Digital Radio		10-20 km	UHF	225-450 MHz		200 kpbs	Yes		Yes	CP to CP data transfer
AN/PSC-5	UHF/VF Manpack LOS and DAMA/SATCOM terminal	1-3 km (LOS) unlimited (TACSAT)	1-3 km	UHF	225-400 MHz	16000 bps		Yes	Yes		Can provide retrans for SINCGARS
MSE	Mobile Subscriber Equipment	Area	Area	UHF	225-400 MHz	16000 bps		Yes			Signal Company maintains MSE net
AN/TSQ-190(V)	TROJAN Special Purpose Intelligence Remote Integrated Terminal		Unlimited				512 kbps	No	Yes		Primary means of sending video feeds from UAV
LRS	UAV Launch and Recovery Shelter		50 km	VHF				Yes			
GCS	UAV Ground Control Shelter		125 km	VHF				Yes			Aerial retrans extends range by 75 km
IREMBASS	Improved Remotely Monitored Battlefield Sensor System		15 km	VHF	138-153 MHz			Yes			Detection range 50m dismounts 250m wheel 350m track
GSR	Ground Surveillance Radar		10 km	j-band	16-16.5 GHz			Yes			Detection range 5 km dismounts 10 km vehicles

* Ranges are greatly reduced by using higher transmission rates.

COMMUNICATIONS SECURITY

F-16. The OPSEC program is managed by and the responsibility of the XO. He analyzes the commander's concept of the operation to determine the EEFI that must be protected from exploitation by threat intelligence. The CP develops appropriate security measures based on an assessment

of threat intelligence collection capabilities and on the friendly indicators that may compromise the EEFI. These OPSEC measures are primarily procedural in nature and include:

- Signal security (SIGSEC) to protect operational information by practicing COMSEC and electronic security techniques.
- Information security to prevent disclosure of operational information through written, verbal, or graphic communications.
- Physical security that consists of physical measures that protect personnel; prevent unauthorized access to equipment, facilities, materiel, and documents; and guard against espionage, sabotage, damage, or theft.

F-17. COMSEC involves physical security, crypto security, and transmission security. COMSEC procedures must be covered in the unit SOP.

F-18. Physical security protects the crypto system and classified documents (including plain-language copies of messages and carbons) from capture or loss. Before an area is vacated, soldiers inspect for messages, carbons, cipher tapes, and copies of maps or orders. Wire lines are patrolled to prevent threat tapping. When SOI codes or cryptographic equipment is lost or captured, the unit reports the facts promptly to the next higher command. The SOP must contain instructions for destruction of equipment and classified documents to prevent their capture or use by the threat. Complete SOIs should not be carried forward of the main CP. When necessary, the troop's communication sergeant distributes extracts for use by forward elements. The SOP establishes priority for issue of SOIs and extracts.

F-19. Crypto security is maintained by using operations codes, numerical encryption devices, secure voice devices, and other secure communications equipment.

F-20. Transmission security limits the threat's ability to listen to radio signals. Any signal transmitted can be intercepted and jammed by the threat. All transmissions should be short and treated as if the threat were listening. Net discipline is the responsibility of all users, but the NCS is responsible for policing the net. Brevity codes, the terrain index reference system (TIRS), and coded reports all serve to reduce net traffic.

SECTION III – STANDING OPERATING PROCEDURES CONSIDERATIONS

F-21. This portion contains information regarding C2 operations that is relevant in establishing a troop SOP. The troop must establish a strong set of guidelines and enforce them on subordinate elements to ensure the standardization.

FBCB2 FILTER SETTINGS

F-22. All FBCB2 systems in the troop should have standardized filter settings. This is particularly important for the Red picture so that as information about icons ages, the system purges them at the same time throughout the entire unit. Standard filter settings, based on the nature

of the threat's operation, should be established in unit SOPs and be the same throughout. (See Chapter 2 for detailed discussion of filter settings.)

THREAT REPORTING

F-23. The general rule is that all contact reports are sent FM (voice). This is the most rapid method to notify all elements in the troop of threat contact. Follow-up SPOTREPs may be sent digitally on FBCB2. However, consideration must be given to transmission queue times. Most units use the guide of "voice up, digital down" in all reporting. This method is, for example, platoon reporting via FM and the troop sending FRAGOs to the platoons via FBCB2.

F-24. To prevent FBCB2 systems from quickly getting bogged down in duplicate reports and multiple sightings of threat contact, the troop establishes reporting protocols that limit where SPOTREPs are forwarded and requires leaders to decide what data is passed to higher and adjacent echelons. For example, the troop commander may require the CP to analyze all reports from the platoons before they are fed to higher and adjacent unit databases, while all reports from the GSR sections are immediately passed. The troop must balance the need for real-time combat information with the negative effects of data overload.

STANDARDIZED REPORTS

F-25. The brigade/squadron sets a schedule for submitting routine standardized reports (commander's SITREP, LOGSTAT, etc.). The SOP establishes the message group, transmission medium, and time window for submission. The SOP should stagger reports to limit the strain on the tactical internet caused by multiple units reporting simultaneously.

CHARTS AND STATUS BOARDS

F-26. The troop CP maintains charts and status boards with current information in the main CP at all times. The status boards may be analog or digital. Regardless, the on-duty shift leader is responsible for updating the boards. The troop XO has overall responsibility for completeness and accuracy of all CP visual display boards. See Figures F-1 through F-10 for examples of troop status boards.

UNIT LOCATIONS

AS OF _____

1 PLT		____ TRP	
2 PLT		____ TRP	
3 PLT		____ TRP	
CDR		____ EN	
1SG		HUMINT	
CP			
		SIG	
MORTAR		RET#1	
FIST		RET#2	
MAINT		TOC	
MEDIC		TAC	
		CTCP	
GSR SEC		FTCP	
GSR SEC			
IREMBASS			

Figure F-1. Unit Locations

UNIT TASK ORGANIZATION

AS OF _____

1 PLT		____ TRP	
2 PLT		____ TRP	
3 PLT		____ TRP	
CDR		____ EN	
1SG		HUMINT	
CP			
		SIG	
MORTAR		RET#1	
FIST		RET#2	
MAINT		TOC	
MEDIC		TAC	
		CTCP	
GSR SEC		FTCP	
GSR SEC			
IREMBASS			

Figure F-2. Unit Task Organization

UNIT STATUS AS OF _____				
UNIT	VEHICLES	AMMO	PERSONNEL	POL
	⊕	⊕	⊕	⊕
	⊕	⊕	⊕	⊕
	⊕	⊕	⊕	⊕
	⊕	⊕	⊕	⊕
TROOP ROLLUP	⊕	⊕	⊕	⊕

Figure F-3. Unit Status

HIGHER'S MISSION AND INTENT
_____
_____
_____
_____
_____
_____
_____

Figure F-4. Higher's Mission and Intent

TROOP MISSION AND INTENT
_____
_____
_____
_____
_____
_____
_____

Figure F-5. Troop Mission and Intent

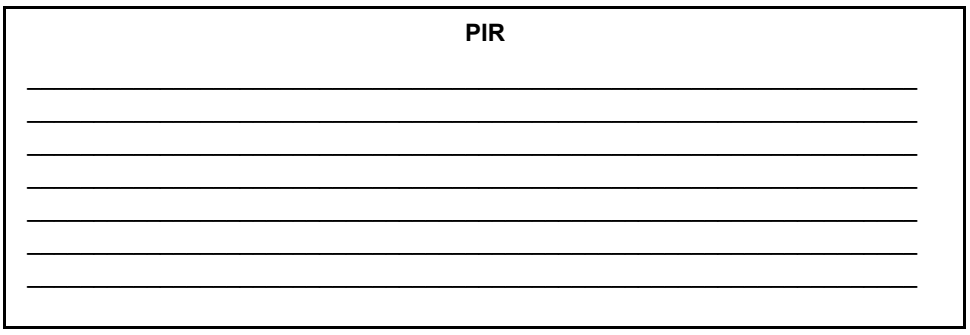


Figure F-6. Priority Intelligence Requirements

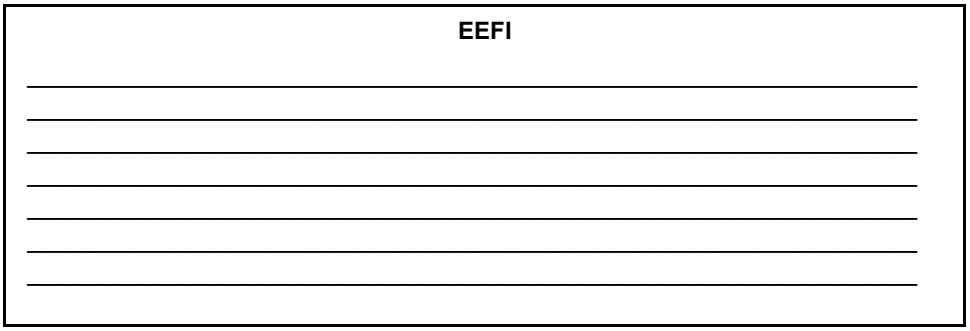


Figure F-7. Essential Elements of Friendly Information

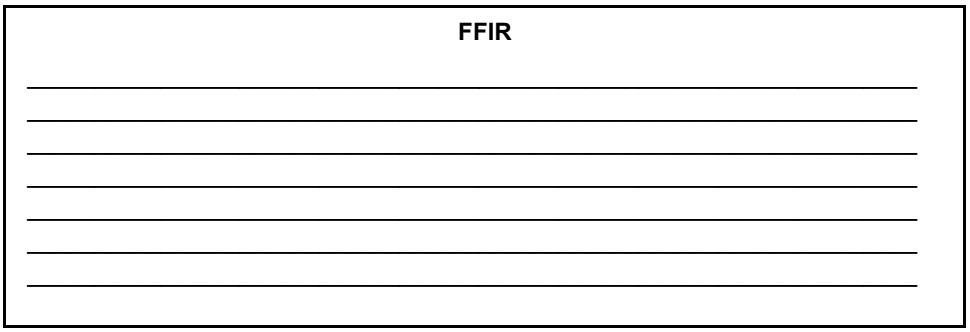


Figure F-8. Friendly Forces Information Requirements

R&S EXECUTION MATRIX											
DTG: _____ MISSION: _____			R&S EXECUTION MATRIX								
PRIORITY	N A I	START / STOP	CCIR/ INSTR							COORD	REMARKS

Figure F-9. Reconnaissance and Surveillance Execution (Synchronization) Matrix

TROOP TIMELINE AND SIGNIFICANT EVENTS

PLANNED ACTIVITY	TIME	LIGHT DATA	TIME	SIGNIFICANT EVENT

Figure F-10. Troop Timeline

FILING SYSTEMS AND NAMING CONVENTIONS

F-27. To promote interoperability and minimize confusion, the brigade/squadron SOP should define the naming convention and file folder system for all reports, orders, overlays, and message traffic. This

will significantly reduce time and frustration associated with locating information generated by other CPs or between shifts as operators go on and off duty.

COLOR STANDARDS

F-28. Digital systems provide an increased number of colors available for the creation of graphic overlays and informational displays. When the brigade/squadron deviates from standard color conventions, the unit SOP should clearly define the use of nonstandard colors, and assign colors for subordinate unit use.

GRAPHICS AND ORDERS

F-29. The brigade/squadron SOP should define the technical process for creating, collating, and transmitting orders and overlays. As a minimum, the troop CP should keep the operations, SITEMP, fire support, and CSS overlays current in both analog and digital formats. The troop 1SG has the additional task of maintaining the CSS overlays.

F-30. When creating orders, bear in mind that FBCB2 does not have unlimited bandwidth. Orders and graphics must be concise to reduce transmission times. Orders transmitted are limited to the size constraint of the FBCB2 orders format.

F-31. Graphics and overlays should be constructed with the same considerations for clarity and size. Situational awareness reduces to some degree the need for control measures, but key leaders must always consider the integration of analog units and that SA may not always be available to all elements. When creating graphics consider the following:

- Use multiple smaller overlays to speed transmission times. System operators can open only the overlays they need and display them simultaneously. For example, all routes and checkpoints could be on one overlay and all boundaries could be on another. This would allow an operator to "turn off" overlays to temporarily relieve screen clutter.
- Battlefield operating system (BOS) overlays should use the operations overlay as the basis of creating their overlays. This reduces redundancy by eliminating the need to reproduce boundaries and other common control measures and limits file size.
- The XO spot-checks all overlays prior to transmission to ensure accuracy, preventing the need to transmit changes or corrections.
- Transmit graphics as they are created with warning orders to avoid a large data dump when the order is completed.

INTEGRATING DIGITAL AND NONDIGITAL UNITS

F-32. It will be many years before the majority of the army is digitally equipped, and even then the brigade will operate in a joint or coalition environment with elements that will not have digital equipment. The key leaders must recognize that integrating an analog unit into the troop requires the retention of most of the analog control techniques. In

essence, two control systems have to be in operation, with particular attention paid to keeping the analog unit apprised of all the relevant information that is flowing digitally. The troop SOP should consider:

- Production and distribution of hard copy orders and graphics.
- Increased graphic control measures. Digital units tend to use less graphic control measures due to increased situational awareness.
- Receiving standardized reports over FM or mobile subscriber equipment (MSE) communications.
- Equipping LNOs with digital systems to give analog units limited connectivity.

REQUIRED SUPPLIES

F-33. Although not SOP, the following minimum supplies and equipment should be maintained in the CP to support operations:

- **Field Desk** with the following equipment:
  - 1 pair of scissors.
  - 1 stapler with a box of staples.
  - 1 box of ballpoint pens.
  - 2 boxes of pencils.
  - 1 box of rubber bands.
  - 1 box of assorted grease pencils.
  - 6 packages of super-fine point alcohol markers.
  - 6 packages of fine point alcohol markers.
  - 3 packages of medium point alcohol markers.
  - 300 sheets of DA Form 1594.
  - 300 sheets of SPOTREPs.
  - 10 pads of white ruled paper.
  - 10 pads of yellow legal pads.
  - 2 rolls of 1-inch masking tape.
  - 3 rolls of clear tape.
  - 2 rolls of double-sided clear tape.
  - 10 envelopes, shotgun.
  - 1 lock set.
  - 1 pencil sharpener.
  - 3 sheets of unit symbols.
  - 3 packages of casualty feeder reports, DA Form 1156.
  - 3 packages of witness statements, DA Form 1155.
  - 3 packages of prisoner of war tags.
- **Storage Chest** with the following equipment:
  - 1 box of clear document protectors.
  - 1 dictionary.
  - 1 box of 3.5-inch floppy disks.
  - 3 reams of white 8.5 x 11-inch copy paper.
  - 1 box of type I plastic bags.
  - 10 memoranda notebooks.

- 1 box each of assorted colored wide-tip permanent markers.
- 1 bottle of rubbing alcohol.
- 3 rolls of acetate overlay material.
- 1 roll of sticky acetate.
- 3 rolls of green engineer tape.
- 5 rolls of assorted colored woven tape.
- 2 rulers.
- 5 rolls of toilet paper.
- 2 rolls of paper towels.
- 1 graphics template.
- 2 boxes each color chemlights.

- **Field Safe** for sensitive items.

NOTE: CP personnel should furnish doctrinal reference manuals (FMs and TMs), equipment, and supplies that relate to their specific fields.

Appendix G

Environmental Protection

CONTENTS

Environmental Risk Management Process G-1
Identify (Environmental) Hazards G-1
Assess Environment Hazards G-1
Develop Controls and Make Decisions G-3
Implement Controls G-3
Supervise and Evaluate G-3
Environmental Risk Assessment Worksheet G-3

Protection of natural resources is an ever-increasing concern. It is the responsibility of all unit leaders to decrease and, if possible, eliminate damage to the environment when conducting all types of operations. This appendix focuses on measures the reconnaissance troop must understand and implement to accomplish that objective. Training Circular (TC) 3-34.489 provides a comprehensive listing of procedures and considerations applicable when operating in environmentally sensitive areas.

SECTION I – ENVIRONMENTAL RISK MANAGEMENT PROCESS

G-1. Environmental risk management is similar to safety risk management and is based on the same philosophy and principles. (NOTE: Refer to the discussion of safety risk management in Appendix B of this manual.) The environmental risk assessment and management process consists of the five steps outlined in the following paragraphs.

STEP 1 – IDENTIFY (ENVIRONMENTAL) HAZARDS

G-2. The command must identify potential sources of environmental degradation during his analysis of METT-TC. These environmental hazards are conditions with the potential for polluting air, soil, or water and/or destroying cultural or historical structures, sites, or artifacts. Figure G-1 lists procedures and considerations for identifying possible sources of environmental risks that the troop may face during a typical tactical operation. The list is organized according to METT-TC factors.

STEP 2 – ASSESS ENVIRONMENTAL HAZARDS

G-3. The troop commander and subordinate leaders use the environmental risk assessment worksheet (Figure G-2) and worksheet instructions (Figure G-3) to analyze the potential severity of environmental degradation for each training activity. The worksheet allows them to quantify the risk to the environment as extremely high, high, moderate, or low. The risk impact value is an indicator of these levels of severity.

IDENTIFYING SOURCES OF BATTLEFIELD RISK (BY METT-TC)
MISSION • Identify and assess known environmental risks during planning. • Determine environmental impact on mission execution. • Specify areas of risk and/or concern to minimize the impact on the unit's scheme of maneuver. • Select alternate training methods or goals as necessary. • Develop maps and/or sketches with detailed areas of environmental concern. • Emphasize the importance of every soldier playing an active role in the identification and timely reporting of new environmental risk elements. • Rapidly and effectively respond to all petroleum, oil, and lubricants, and/or hazardous waste accidents.
ENEMY (THREAT FORCES) • Identify probable areas of environmental contamination that could affect friendly force movement. • Evaluate intelligence reports of how the threat will employ his equipment and/or capabilities to overcome or take advantage of environmental factors. • Develop threat target options to minimize environmental effects. • Maneuver friendly forces in such a way as to direct threat action away from environmentally sensitive areas, when feasible.
TERRAIN AND WEATHER • Provide recommended paths of movement to avoid environmentally sensitive areas. • Identify well-defined terrain features to assist in navigation accuracy. • Obtain and analyze weather data to diminish possible environmental risks, focusing on predominant and developing weather patterns.
TROOPS AND SUPPORT AVAILABLE • Brief all soldiers thoroughly on environmental risks, concerns, and/or points of interest. • Develop a detailed and accurate SOP that identifies guidelines for avoiding risk areas without inhibiting mission accomplishment. • Brief troops on how to prevent environmental damage based on anticipated areas of probable risk. • Employ practice scenarios that test soldier response to changing environmental risks and promote use of the decision-making process in dealing with risks. • Require accurate and timely reporting pertaining to all environmental issues (friendly or threat).
TIME AVAILABLE • Maximize planning time. (NOTE: One key step is to minimize the complexity and length of the mission briefing as much as possible.) • Practice and develop various mission profiles that emphasize adjusting for changing environmental factors, while maintaining the desired momentum.
CIVIL CONSIDERATIONS • Identify and emphasize rules of engagement and/or rules of interaction that minimize environmental damage. • Expect media coverage and analysis of troop actions that affect the environment. • Anticipate and limit collateral damage to civil infrastructure (such as agriculture and other food production, delivery and supply systems, and hazardous chemical storage facilities). • Identify environmental targets of value that the threat might attack.

Figure G-1. Example Procedures for Identifying Environmental Risks

STEP 3 – DEVELOP CONTROLS AND MAKE DECISIONS

G-4. Based on the results of the risk assessment, the troop commander makes decisions and develops measures to reduce significant environmental risks. Risk decisions are made at a level of command that corresponds to the degree of risk. Leaders should brief all responsible individuals and agencies (to include the installation environmental office, if applicable) on the proposed operational and training plans and pertinent high-risk environmental factors.

STEP 4 – IMPLEMENT CONTROLS

G-5. The troop commander and subordinate leaders implement environmental protection measures at all stages of operational planning, preparation, and execution. They integrate these measures into plans, orders, SOPs, training performance standards, and rehearsals.

STEP 5 – SUPERVISE AND EVALUATE

G-6. The troop commander must enforce environmental protection standards during supervision of all training activities.

SECTION II – ENVIRONMENTAL RISK ASSESSMENT WORKSHEET

G-7. To use the environmental risk assessment worksheet (see Figure G-4 for a sample, completed worksheet) for a specific operation or training event, the troop commander and subordinate leaders first conduct an operational analysis to break down the exercise into events, allowing them to manage the risks for the various tasks. They also identify particular tasks for the operation using the troop's mission training plan (MTP). Leaders develop the hazard list using their experience, lessons learned, unit SOPs, applicable references, and guidance from the chain of command. They identify applicable environmental standards, laws, and ROE that affect the mission. Leaders annotate each task and associated environmental hazards in sections E and F on the risk assessment worksheet.

G-8. The commander and subordinates assess each hazard to determine the risk for potential harm to the environment. Their assessment is based on how often the environmental hazard occurs during the operation (probability) and what effect the hazard has on the environment (severity). They use the probability and severity definitions from FM 3-100.4.

G-9. They develop controls to eliminate or reduce the probability or severity of each hazard. They identify a mix of educational-, physical-, and avoidance-type controls and annotate them in section H. Once all risk control measures are in place, any residual risk is annotated in section I.

G-10. Leaders identify how each control would be implemented and assign responsibility to unit personnel. The "how to" for each control is annotated in section J. In the sample worksheet, fueling during resupply operations is identified as a possible environmental concern. Leaders identified control measures to include ensuring that operators were properly trained to dispense fuel, and appropriate spill equipment was available. This process requires leaders to anticipate environmental requirements and incorporate them as part of long-range, short-range, and near-term planning.

A. Mission or Task:	B. Date/Time Group Begin: End:	C. Date Prepared:		
D. Prepared By: (Rank, Last Name, Duty Position)		Page ____ of ____		
E. Task:	F. Identify Hazards:	G. Assess Hazards:	H. Develop Controls:	I. Determine Residual Risk:	J. Implement Controls ("How To"):
K. Determine overall mission/task risk level after controls are implemented (circle one): LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)					

Figure G-2. Environmental Risk Assessment Worksheet

Worksheet Instructions	
Block	
A – E	Self-explanatory.
F	Identify Hazards. Identify hazards by reviewing METT-TC factors for the mission or task. Additional factors include historical lessons learned, experience, judgment, equipment characteristics and warnings, and environmental considerations.
G	Assess Hazards. Assessment includes historical lessons learned, intuitive analyses, experience, judgment, equipment characteristics and warnings, and environmental considerations. Determine initial risk for each hazard by applying the risk assessment matrix (refer to Chapter 2, FM 3-100.4). Enter the risk level for each hazard.
H	Develop Controls. Develop one or more controls for each hazard to either eliminate the hazard or reduce the risk (probability and/or severity) of a hazardous incident. Specify who, what, where, when, and how for each control. Enter controls.
I	Determine Residual Risk. Determine the residual risk for each hazard by applying the risk assessment matrix (refer to Chapter 2, FM 3-100.4). Enter the residual risk level for each hazard.
J	Implement Controls. Decide how each control will be put into effect or communicated to the personnel who will make it happen (written or verbal instruction: tactical, safety, garrison SOPs, rehearsals). Enter controls.
K	Determine Overall Mission/Task Risk. Select the highest residual risk level and circle it. This level becomes the overall mission or task risk level. The commander decides whether the controls are sufficient to accept the residual risk. If the risk is too great to continue the mission or task, the commander directs development of additional controls or modifies, changes, or rejects the COA.
	Supervise and Evaluate. This last step is not on the worksheet. Plan how each control will be monitored for implementation (continuous supervision, spot checks), and reassess hazards as the situation changes. Determine if the controls worked and if they can be improved. Communicate lessons learned.

Figure G-3. Instructions for Risk Management Worksheet

A. Mission or Task: Troop STX	B. Date/Time Group **Begin:** 010600 JUN XX **End:** 020100 JUN XX	C. Date Prepared: 22 MAY XX
D. Prepared By: (Rank, Last Name, Duty Position) 1LT Jones, XO	Page 1 of 1.	

E. Task:	F. Identify Hazards:	G. Assess Hazards:	H. Develop Controls:	I. Determine Residual Risk:	J. Implement Controls ("How To"):
Conduct resupply	Fuel spills during refueling	Moderate (M)	1. Train drivers and fuel handlers on proper fuel handling procedures 2. Provide spill equipment. 3. Locate refueling sites away from waterways.	Low (L)	Troop SOP, paragraph 8, conduct training prior to STX.
Establish a tactical assembly area.	Starting range and training area fires.	Moderate (M)	1. Inform soldiers that no open fires are allowed. 2. Brief soldiers on use of pyrotechnics.	Low (L)	Troop SOP para 7(a), Range regulations.

K. Determine overall mission/task risk level after controls are implemented (circle one):
LOW (L) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)

Figure G-4. Sample Environment Risk Assessment Worksheet

Glossary

AA	assembly area; avenue of approach
AAR	after-action review
ABCS	Army battle command system
ABF	attack by fire
ACA	airspace coordination area
ACADA	automatic chemical agent alarm
ACE	analysis and control element
ACF	aviation close fires
ACL	aircraft cargo load
ACP	air coordination point
ACT	analysis and control team; air cavalry troop
ADA	air defense artillery
ADAM	area denial artillery munitions
AFATDS	advanced field artillery tactical data system
AGL	above ground level
AGM	attack guidance matrix
AGS	armored gun system
AGT	air-ground team
A/L	administrative/logistics
ALO	air liaison officer
AM	amplitude modulation
AMC	Air Mobility Command
AMDCCOORD	air and missile defense coordinator
AMDS	advanced monitoring display system
ammo	ammunition
AMO	air movement officer
AMDWS	air and missile defense workstation
ANBACIS	automated nuclear, biological, and chemical information system
AO	area of operations
AOI	area of interest
AOR	area of responsibility

APU	auxiliary power unit
ARFOR	Army Force
ASAS	all-source analysis system
ASAS–RWS	all source analysis system–remote workstation
ASR	alternate supply route
AT	antitank
ATACMS	Army tactical missile system
ATCCS	Army tactical command and control system
ATGM	antitank guided missile
AUEL	automated unit equipment list
AV	air vehicle
AVO	air vehicle operator
AWACS	Airborne Warning and Control System
AWADS	adverse weather aerial delivery system
AXP	ambulance exchange point
BCIS	battlefield combat identification system
BCT	brigade combat team
BDA	battle damage assessment
BDAR	battle damage assessment and repair
bde	brigade
BHL	battle handover line
BMNT	beginning of morning nautical twilight
bn	battalion
BOS	battlefield operating system
BP	battle position
BRT	brigade reconnaissance troop
BSA	brigade support area
BSB	brigade support battalion
BSC	brigade support company
BUA	built-up area
BUB	battle update briefing
C2	command and control
C3	command, control, and communications
C4I	command, control, communications, computers, intelligence
C4ISR	command, control, communications, computers, intelligence, surveillance, and reconnaissance

CA	civil affairs
CAB	combat aviation brigade
cal	caliber
CAM	chemical agent monitor
CANA	convulsant antidote for nerve agent
CAS	close air support
CASEVAC	casualty evacuation
CATK	counterattack
cav	cavalry
cbt	combat
CBU	cluster bomb unit
CCIR	commander's critical information requirements
CCP	casualty collection point
CDR; cdr	commander
CDS	container delivery system
CFF	call for fire
CFL	coordinated fire line
CFN	call for fire net
CFS	call for support
CFZ	critical friendly zone
CGS	common ground station
cGy/hr	centigray(s) per hour
CHAT	counterintelligence (CI)/human intelligence (HUMINT) automated tool (kit)
CHS	combat health support
CI	counterintelligence
CIP	combat identification panel
cm	centimeter(s)
cmd	command
CMOC	civil-military operations center
CNA	computer network attack
CNR	combat net radio
co	company
COA	course of action
COC	chain of command
COE	contemporary operational environment

COLT	combat observation lasing team
commo	communications
COMSEC	communications security
CONUS	continental United States
COP	common operational picture
CP	command post
CRD	counterreconnaissance detachment
CRT	combat repair team
CS	combat support
CSAR	combat search and rescue
CSOP	combat security outpost
CSS	combat service support
CSSCS	combat service support control system
CTCP	combat trains command post
CW	continuous wave
DA	Department of the Army
DAP	decontamination apparatus
div	division
DLIC	detachment left in contact
DOCEX	document exploitation
DOD	Department of Defense
DO/DO	drive-on/drive-off
DPICM	dual-purpose improved conventional munitions
DRS	digital reconnaissance system
drv; dvr	driver
DS	direct support
DS2	decontaminating solution 2
DSM	division support matrix
DSO	domestic support operation
DS/R	direct support/reinforcing
DST	division support template
DTG	date time group
DTSS	digital topographic support system
DZ	drop zone
EA	engagement area
EAB	echelons above brigade

EAD	echelons above division
EAVO	external air vehicle operator
EBC	embedded battle command (software)
EC	effects coordination
ECCM	electronic counter-countermeasures
ECM	electronic countermeasures
ECT	effects coordination team
EEFI	essential elements of friendly information
EENT	end of evening nautical twilight
EFST	essential fire support task
ELINT	electronic intelligence
eng; engr	engineer
EO	electro-optical
EOM	end of mission
EPLRS	enhanced position location reporting system
EPLRS–VHSIC	enhanced position location reporting system–very high speed integrated circuit
EPW	enemy prisoner of war
ERFS	extended range fuel supply
EVENTEMP	event template
EW	electronic warfare
1SG	first sergeant
FA	field artillery
FAADC2I	forward area air defense command, control, and intelligence
FAADC3I	forward area air defense command, control, communications and intelligence
FARE	forward area refueling equipment
FARP	forward arming and refueling point
FASCAM	family of scatterable mines
FBCB2	Force XXI Battle Command, Brigade and Below (system)
FDC	fire direction center
FEBA	forward edge of the battle area
FFA	free fire area
FFAR	folding-fin aerial rocket
FFIR	friendly forces information requirements
FHA	foreign humanitarian assistance
FIST	fire support team

FISTV	fire support team vehicle
FL	firing line
FLE	forward logistics element
FLIR	forward looking infrared
FLOT	forward line of own troops
FM	frequency modulation (radio); field manual
FOS	forward observer software
FP	fighting patrol
FPF	final protective fires
FPL	final protective line
FRAGO	fragmentary order
FS	fire support
FSB	forward support battalion
FSC	forward support company
FSCL	fire support coordination line
FSCM	fire support coordination measures
FSCOORD	fire support coordination
FSE	fire support element
FSO	fire support officer
ft	foot; feet
fwd	forward
gal	gallon(s)
GBCS	ground-based common sensor
GBS	ground-based sensor
GCCS-A	global command and control system-Army
GCS	ground control station
GCT	ground cavalry troop
GIRS	grid index reference system
GLD	ground laser designator
GO	governmental organization
gnr	gunner
gpm	gallon(s) per minute
GPS	global positioning system
GRREG	graves registration
GSR	ground surveillance radar
G/VLLD	ground/vehicle laser locator designator

HA	holding area
HC	hexachloroethene (smoke)
HE	high explosive
HEDP	high explosive duel purpose
HEMTT	heavy expanded mobile tactical truck
HF	high frequency
HHC	headquarters and headquarters company
HHT	headquarters and headquarters troop
HMMWV	high mobility multipurpose wheeled vehicle
HN	host nation
HPT	high-payoff target
HQ	headquarters
HUMINT	human intelligence
HVA	high-value asset
IAV	interim armored vehicle
IAW	in accordance with
IBCT	interim brigade combat team
ICAM	improved chemical agent monitor
ICM	improved conventional munitions
ID	identification
IEDK	individual equipment decontamination kit
IEW	intelligence and electronic warfare
IMETS	integrated meteorological system
IMINT	imagery intelligence
INC	internet controller
INFOSEC	information security
INFOSYS	information system
INS	inertial navigation system
intel	intelligence
IO	information operations
IP	internet protocol
IPB	intelligence preparation of the battlefield
IR	information requirements; infrared
IREMBASS	improved remotely monitored battlefield sensor system
ISMS	improved SIGINT (signal intelligence) manpack system
ISR	intelligence, surveillance, and reconnaissance

JAAT	joint air attack team
JDISS	joint deployable intelligence support system
JSTARS	joint surveillance target attack radar system
JSTCD	Joint Strategic Deployment Training Center
JTF	joint task force
JTIDS	joint tactical information distribution system
JTRS	joint tactical radio system
JWICS	joint worldwide intelligence communications system
k	thousand
KIA	killed in action
km	kilometers
LAN	local area network
LAPES	low-altitude parachute extraction system
lb	pound(s)
LC	line of contact
LCD	Limited Conversion Division
LCU	lightweight computer unit
LD	line of departure
ldr	leader
LEN	large extension node
LLDR	lightweight laser designator/range finder
LNO	liaison officer
LOA	limit of advance
LOC	lines of communication
LOG SITREP	logistical situation report
LOGPAC	logistics package
LOGSTAT	logistical status
LOR	limit of responsibility
LOS	line of sight
LP	listening post
LRAS3	long-range advanced scout surveillance system
LRP	logistics release point
LRSD	long-range surveillance detachment
LRU	line replaceable unit
LST	laser spot tracker
LT	lieutenant

LTO	logistics task order
LVAD	low velocity air drop
LZ	landing zone
m	meter(s)
MACOM	major command
MANPADS	man portable air defense system
MASINT	measurement and signature intelligence
max	maximum
MBA	main battle area
MC	mobility corridor
MCOO	modified combined obstacle overlay
MCS	maneuver control system
MDMP	military decision-making process
MEDEVAC	medical evacuation
MEL	maximum engagement line
MELIOS	mini eye-safe laser infrared observation set
METL	mission essential task list
METT-TC	mission, enemy, terrain and weather, troops and support available, time available, and civil considerations
MFP	mortar firing point
MGS	mobile gun system
MHz	megahertz
MI	military intelligence
MICLIC	mine clearing line charge
MIJI	meaconing, intrusion, jamming, and interference
min	minute(s); minimum
MLRS	multiple launch rocket system
mm	millimeter(s)
MMS	mast-mounted sight
MOD	mobile obstacle detachment
MOPMS	modular pack mine system
MOPP	mission-oriented protection posture
mort	mortar
MOS	military occupational specialty
MOUT	military operations in urbanized terrain
MP	military police; monitor-programmer

MPP	most probable position
MRB	motorized rifle battalion
MRC	motorized rifle company
MRE	meals ready to eat; mission rehearsal exercise
MRP	motorized rifle platoon
MSD	mobile support detachment
MSE	mobile subscriber equipment
MSG	multisensor ground (platoon)
MSR	main supply route
MTI	moving target indicator
MTOE	modified table(s) of organization and equipment
MTP	mission training plan
mtr	motor
MTS	movement tracking system
MTT	military training team
MTW	major theater of war
NAAK	nerve agent antidote kit
NAI	named area of interest
NATO	North Atlantic Treaty Organization
NAVWAR	navigation warfare
NBC	nuclear, biological, and chemical
NBCWRS	nuclear, biological, chemical warning and reporting system
NCO	noncommissioned officer
NCOIC	noncommissioned officer in charge
NCS	net control station
neg	negative
NEO	noncombatant evacuation operation
NFA	no fire area
NG	National Guard
NGF	naval gunfire
NGO	nongovernmental organization
NLT	not later than
NMC	nonmission capable
NOD	night observation device
NOE	nap of the earth
NPL	no penetration line

NSA	National Security Agency
NSFS	naval surface fire support
NTDR	near-term data radio
NVD	night vision device
NVG	night vision goggles
OB	order of battle
obj	objective
OCOKA	observation and fields of fire, cover and concealment, obstacles, key terrain, avenues of approach (considerations in evaluating terrain as part of METT-TC)
OE	operational environment
OEG	operational exposure guidance
OI	operations and intelligence
OIC	officer in charge
OMT	operations management team
O/O	on order
OP	observation post
OPCON	operational control
OPFOR	opposing force
OPLAN	operation plan
OPORD	operation order
ops	operations
OPSEC	operations security
OPTEMPO	operating tempo
ORP	objective rally point
OT	observer-target
OVE	on-vehicle equipment
PAC	personnel and administration center
PAO	public affairs office; public affairs officer
PAX	personnel (number of)
PC	personnel carrier
PCC	precombat check
PCI	precombat inspection
PDDE	power-driven decontamination equipment
PEOC3S	program executive officer command, control, and communications systems
PERSTAT	personnel status

PGM	precision-guided munitions
PIR	priority intelligence requirements
PL	phase line
PLGR	position locator grid reference
PLL	prescribed load list
plt	platoon
PMCS	preventive maintenance checks and services
PME	peacetime military engagement
PMS	portable monitoring set
POC	point of contact
POE	priority of effort
POF	priority of fires
POL	petroleum, oils, and lubricants
POS	priority of support
pos	position; positive
POSNAV	position navigation
POW	prisoner of war
PP	passage point
prep	preparatory
PSG	platoon sergeant
PSYOP	psychological operations
PVO	private volunteer organization
PW	prisoner of war
PZ	pickup zone
QRF	quick reaction force
R&S	reconnaissance and surveillance
RAAMS	remote antiarmor mines system
RACO	rear area combat operations
RATO	rocket assist takeoff
recce	reconnaissance
recon	reconnaissance; reconnoiter
REDCON	readiness condition
regt	regiment
RES	radiation exposure guidance
res	reserve
retrans	retransmission

RFA	restrictive fire area
RFI	request for information
RFL	restrictive fire line
R/GS	reinforcing/general support
RHO	reconnaissance handover
RHOL	reconnaissance handover line
RI	relevant information
RMS	root mean square
ROE	rules of engagement
ROI	rules of interaction
ROM	refuel on the move
ROZ	restricted overflight zone
RP	release point
RSOI	reception, staging, onward movement, and integration
RSTA	reconnaissance, surveillance, and target acquisition
RTD	return to duty
RTO	radiotelephone operator
RTP	radiotelephone procedures
RV	reconnaissance vehicle (Stryker)
RVT	remote video terminal
S1	adjutant (US Army)
S2	intelligence officer (US Army)
S2X	intelligence officer (Military Intelligence Company) (US Army)
S3	operations and training officer (US Army)
S3-Air	air operations officer (US Army)
S4	supply officer (US Army)
S5	civil affairs officer (US Army)
S6	signal officer (US Army)
SA	situational awareness
SAFFMM	sustaining, arming, fixing, fueling, manning, moving
SALUTE	size, activity, location, unit, time and equipment
SAW	squad automatic weapon
SBCT	Stryker brigade combat team
SBF	support by fire
sct	scout

SD	security detachment
SDS	sorbent decontamination system
SE	security element
SEAD	suppression of enemy air defense
sec	second(s)
SEN	small extension node
SF	Special Forces
SFC	sergeant first class
SGLI	Serviceman's Group Life Insurance
SGT	sergeant
SHORD	short-range air defense
SIDPERS	Standardization Installation/Division Personnel System
SIGINT	signal intelligence
SIGSEC	signal security
SINCGARS	Single-Channel Ground/Airborne Radio System
SINCGARS–SIP	Single-Channel Ground/Airborne Radio System–System Improvement Program
SIP	System Improvement Program
SIR	specific information requirements
SITEMP	situation template
SITREP	situation report
SJA	Staff Judge Advocate
SKE	system keeping equipment
SMS	sensor monitoring set
SOF	special operations forces
SOFA	status of forces agreement
SOI	signal operating instructions
SOSR	suppress, obscure, secure, reduce
SOSRA	suppress, obscure, secure, reduce , assault
SOP	standing operating procedure
SP	start point
SPC	specialist
SPF	special purpose force
SPOTREP	spot report
SPIRIT	special purpose intelligence remote integrated terminal
Spt	support; supporting

sqd	squad
sqdn	squadron
SSB	single side band
SSC	smaller-scale contingency
SSG	staff sergeant
SU	situational understanding
SWO	squadron weather officer
SWT	scout weapons team
TAA	tactical assembly area
TAC CP	tactical command post
TAC SOP	tactical SOP
TACAIR	tactical air (support)
TACP	tactical air control party
TACSAT	tactical satellite
TAEC	tactical air effects controller
TAI	target area of interest
TAML	Theater Army Medical Laboratory
TC-ACCIS	transportation coordinator–automated command and control system
TEP	theater engagement plan
TI	tactical Internet
TIM	toxic industrial material
TIRS	terrain index reference system
TIS	thermal imaging system
TLP	troop-leading procedures
tm	team
TOA	transfer of authority
TOC	tactical operations center
TOE	table of organization and equipment
TOR	transfer of responsibility; terms of reference
TOT	time on target
TOW	tube-launched, optically-tracked, wire-guided (missile)
TRP	target reference point
trp	troop
TTP	tactics, techniques, and procedures
TTT	time to target

TV	television
UAV	unmanned aerial vehicle
UBL	unit basic load
UHF	ultra high frequency
UIC	unit identification code
ULLS-G	unit-level logistics system–ground
UMC	unit movement coordinator
UMCP	unit maintenance collection point
UMO	unit movement officer
UMT	unit ministry team
UN	United Nations
US	United States
USAF	United States Air Force
USMC	United States Marine Corps
USN	United States Navy
VHF	very high frequency
VHSIC	very high speed integrated circuit
VMF	variable message format
WAN	wide area network
WARNO	warning order
WCS	weapon control status
WIA	wounded in action
WIN-T	warfighter information network-terrestrial
WMD	weapons of mass destruction
WP	white phosphorous
XO	executive officer

Bibliography

AFJM 24-204. *Preparing Hazardous Materials for Military Air Shipments*. 1 March 1997.

AR 380-19. *Information Systems Security.* 27 February 1998.

AR 55-355. *Transportation and Travel – Traffic Management Regulations*. 16 February 1995.

Code of Federal Regulations (CFR) 49. *Transportation*. 1 October 2001.

DA Form 1155. *Witness Statement on Individual*. 1 June 1966.

DA Form 1156. *Casualty Feeder Report*. 1 June 1966.

DA Form 1594. *Daily Staff Journal or Duty Officer's Log*. November 1962

DA Form 2404. *Equipment Inspection and Maintenance Worksheet*. April 1979.

DA Form 5988E. *Equipment Maintenance and Inspection Worksheet*. March 1991.

DA Pam 740-1. *Instruction Guide to Basic Military Preservation and Packing*. 29 June 1990.

DD Form 551. *Record of Interment*. August 1984.

DD Form 1077. *Collecting Point Register of Deceased Personnel*. July 1984.

FM 1-02 [FM 101-5-1]. *Operational Terms and Graphics*. 30 September 1997.

FM 2-00.21 [FM 34-2-1]. *Techniques, Tactics, and Procedures for Reconnaissance, Surveillance, and Intelligence Support to Counterreconnaissance.* 19 June 1991.

FM 2-22.3 [FM 34-52]. *Intelligence Interrogation*. 28 September 1992.

FM 2-22.2 [FM 34-5]. *Human Intelligence and Related Counterintelligence Operations*. 29 July 1994.

FM 3-0 [FM 100-5]. *Operations*. 14 June 2001.

FM 3-01.8 [FM 44-8]. *Combined Arms for Air Defense*. 1 June. 1999.

FM 3-04.114 [FM 1-114]. *Air Cavalry Squadron/Troop Operations (and Digital Annex)*. 1 February 2000.

FM 3-06 [FM 90-10]. *Urban Operations*. 30 May 2001.

FM 3-07 [FM 100-20]. *Stability Operations and Support Operations*. 5 December 1990.

FM 3-07.3 [FM 100-23]. *Peace Operations*. 30 December 1994.

FM 3-11 [FM (M) 3-100]. *Chemical Operations, Principles and Fundamentals*. 8 May 1996.

FM 3-11.3 [FM(M) 3-3]. *NBC Contamination Avoidance*. 16 November 1992.

FM 3-11.4 [FM(M) 3-4]. *NBC Protection* (FMFM 11-9). 29 May 1992.

FM 3-11.5 [FM 3-5]. *NBC Decontamination*. 17 November 1993.

FM 3-18.12 [FM 90-4]. *Air Assault Operations*. 16 March 1987.

FM 3-20.95 [FM 17-95]. *Cavalry Operations*. 24 December 1996.

FM 3-20.96. *Cavalry Squadron (RSTA)*. (To be published.)

FM 3-20.97 [FM 17-97]. *Cavalry Troop*. 3 October 1995.

FM 3-20.98 [FM 17-98]. *Reconnaissance Platoon.* To be Published.

FM 3-90 [FM 100-40]. *Tactics*. 4 July 2001. 4 July 2001

FM 3-90.2 [FM 71-2]. *The Tank and Mechanized Infantry Battalion Task Force*. 27 September 1988.

FM 3-90.3 [FM 71-3]. *The Mounted Brigade Combat Team*. November 2001

FM 3-91 [FM 71-100]. *Division Operations*. 28 August 1996.

FM 3-100.4 [FM 20-400]. Environmental Considerations in Military Operations. 15 June 2000.

FM 3-100.12. Multiservice TTP for Risk Management. March 2001.

FM 4-0 [FM 100-10]. *Combat Service Support*. 03 October 1995.

FM 4-01 [FM 55-1]. *Army Transportation*. 3 October 1995.

FM 4-01.1 [FM 55-9]. *Unit Air Movement Planning*. 5 May 1993.

FM 4-01.15 [FM 55-15]. *Transportation Reference Data*. 27 October 1997.

FM 5-0 [FM 101-5]. *Army Planning and Orders Preparation*. 31 May 1997

FM 5-19 [FM 100-14]. *Risk Management*. 23 April 1998.

Military Standard (MIL-STD)-129J. *Marking for Shipment and Storage*. 25 November 1986.

TB 55-46-1. *Standard Characteristics for Transportability of Military Vehicles and Other Outsize/Overweight Equipment*. 15 January 1993.

TC 3-34.489. *The Soldier and the Environment*. 8 May 2001.

Index

A

actions on contact, 3-15 – 3-21, 3-32, 7-29 – 7-30
  eight forms of contact, 3-16
advanced field artillery tactical data system, (AFATDS), 1-13, 2-31, 6-8, 6-12
air defense, 6-60 – 6-62
all source analysis system (ASAS), 2-31, 3-29
analysis and control team (ACT), 3-29
area of responsibility (AOR), 1-22 – 1-23
Army aviation, 6-25
  air cavalry, 6-25 – 6-26
  air-ground integration, 6-26 –6-32, 7-18 – 7-20
  attack helicopter support, 5-32, 6-33 –6-41
  assault and cargo helicopter support, 6-42 – 6-44
Army battle command system, 2-31 – 2-32
Army tactical command and control system (ATCCS), 2-31
assembly area, 5-33 – 5-36, 5-41

B

battle command methodology, 2-2 – 2-5
battle handover, 5-43, 5-46
breaching, 5-45 – 5-47, 6-58, 6-60
brigade combat team (BCT), 1-9 – 1-12, 3-2 – 3-11, 3-13, 3-15 – 3-17, 3-19, 3-22 – 3-23, 3-31, 3-39, 3-45, 3-50, 4-3 – 4-5, 4-9 – 4-11, 4-18 – 4-19, 4-29, 4-31
  ISR operations, 1-10
brigade reconnaissance troop (BRT), 1-2, 1-11 – 1-12, 3-1, 3-13, 3-22 – 3-23, 4-36

C

cavalry squadron (RSTA), 1-2, 1-3 – 1-8
CHAT, 2-38
COLT, 1-8, 1-12, 5-32, 6-12 – 6-13
combat service support, 6-57, 7-31
  combat health support, 8-26 – 8-28
  enemy prisoners of war (EPW), 8-29
  evacuation, 8-26 – 8-27
  FBCB2 role, 8-5 – 8-6
  for brigade reconnaissance troop, 8-13
  for RSTA squadron , 8-10
  graves registration (GRREG), 8-24 – 8-25
  maintenance and recovery operations, 8-22 – 8-24
  personnel and administration center (PAC), 8-25
  resupply operations, 6-42 – 6-44, 8-16 – 8-22
  in stability and support operations, D-25
  supply operations, 8-14 – 8-16
  tactical functions, 8-2 – 8-4
  troop trains, 8-7 – 8-10
  unit ministry team, 8-28
combat service support control system (CSSCS), 2-31, 8-2
combat support. *See intelligence, fire support, target acquisition, army aviation, unmanned aerial vehicle (UAV) platoon, multisensor ground platoon, ground sensor platoon, NBC reconnaissance platoon, engineer operations (BCT), air defense.*
command and control (C2), 2-6 – 2-12
  digital systems, 2-31 – 2-38
  FM radio nets, 2-29 – 2-30
  troop-leading procedures, 2-12 – 2-28
command post, 1-6, 1-11, 2-6, 2-33
  battle drills, F-5 – F-6
  BRT, 1-11 – 1-12
  communications, F-6 – F-11
  continuous operations, F-3
  displacing, F-5
  positioning, F-4
  recce troop, 1-6
  responsibilities, F-1 – F-2
  SOP, F-11 – F-19
  security, F-4 – F-5
commander's critical information requirements (CCIR), 1-2, 3-1
commander's reconnaissance guidance, 3-4, 3-11, 4-3
  engagement criteria, 3-12
  focus, 3-11
  tempo, 3-11 – 3-12
common operational picture (COP), 1-1, 2-7
communications, 2-28 – 2-30, 7-3, 7-6, 7-10, 7-12 – 7-14, 7-17, 7-19, 7-24, 7-25, 7-27, 7-28
compliance inspection. *See stability operations and support operations,*

reconnaissance troop employment.
contiguous operations, 1-21 – 1-22, 3-35
counterreconnaissance, 2-37, 3-34, 4-2, 4-5, 4-8, 4-11, 4-12, 5-17, 5-20
control measures. *See graphic control measures.*
course of action (COA), 3-17, 3-20, 7-2

D

decontamination. *See nuclear, biological, chemical (NBC).*
defensive operations, 1-26 – 1-28, 6-11, 6-58, 8-10. *See also economy of force.*
  engagement area development, 5-21
deployment, E-1 – E-5

E

economy of force 5-15 – 5-31
  defend an AO, 5-19
  defend a troop BP, 5-18
  engagement area development, 5-21 – 5-31
engineer operations (BCT), 3-42, 3-48, 3-53, 4-8, 6-56 – 6-60
environmental risk management, G-1 – G-6
exfiltration, 3-33 – 3-34, 7-23

F

fire control, 5-19 – 5-21
fire support, 6-8, 7-12, 7-14, 7-18
  assets and capabilities, 6-13 – 6-25
  coordination measures, 6-19 – 6-25
fire support coordinator (FSCOORD), 6-8
fire support team (FIST), 1-7, 1-17, 5-32, 6-9
Force XXI Battle Command Brigade and Below (FBCB2), 2-4, 2-31, 2-33 – 2-42, 4-10, 5-7
forward area air defense command, control, communications, and intelligence system (FAADC3I) 2-31
fratricide, 2-41, 5-22, 5-29, B-6 – B-13
full spectrum operations, 1-30

G

global command and control system–Army (GCCS-A), 2-31
graphic control measures, 2-35 – 2-37, 4-20, 5-41 – 5-43
ground sensor platoon, 1-4, 1-9, 6-48 – 6-50
ground surveillance radar, 3-24, 3-29, 4-8, 6-50 – 6-51

H

hasty attack, 5-11 – 5-14
human intelligence (HUMINT), 1-7, 3-11, 3-36, 6-1 – 6-7, 7-2
  collection operations, 6-3 – 6-4
  document exploitation (DOCEX), 6-4
  tactical questioning, 6-4 – 6-6

I

improved remotely monitored battlefield sensor system (IREMBASS), 1-8, 3-29, 4-8, 6-49
infiltration, 3-28 – 3-33, 4-12, 5-42, 7-23
  actions on contact, 3-32
  aerial insertion, 3-31
  dismounted, 3-30
  employment by section, 3-30
  employment by unit, 3-30
  mounted, 3-30
  multiple lane, 3-31
  single-lane, 3-31
intelligence, 6-1 – 6-7, 6-57. *See also human intelligence.*
intelligence preparation of the battlefield (IPB), 1-2, 1-3
intelligence, surveillance, and reconnaissance (ISR), 1-1, 1-3, 1-10, 2-3, 2-5, 2-6, 2-13, 2-19 – 2-22, 2-28, 2-30, 3-2, 3-3 – 3-4, 3-13, 7-2, 7-21

J

joint surveillance and target attack radar system (JSTARS), 3-4, 3-18, 3-23

L

linear operations, 1-21 – 1-23
local area network (LAN), 2-31

M

major theater of war (MTW), 1-1, 1-31, 3-8, 3-50
maneuver control system (MCS), 2-31
medical evacuation, 6-44 – 6-45, 7-19
mission, enemy, terrain, troops and support available, time available, and civil considerations (METT-TC), 2-13 – 2-18
mortar section, 1-8, 4-20, 4-33
multisensor ground platoon, 1-4, 1-9, 6-51 – 6-54

N

noncontiguous operations, 1-21 – 1-22, 3-35
nonlinear operations, 1-21 – 1-23
nuclear, biological, chemical (NBC) operations, 3-16, 3-27, 3-53, 6-54 – 6-56, C-1 – C-14
  casualties, C-1, C-2, C-5, C-6, C-7 – C-8, C-11
  decontamination, C-1, C-5 – C-8, C-11 – C-13

defense, C-1 – C-3, C-5 – C-6
marking, C-8 – C-9, C-14
mission-oriented protective posture (MOPP), C-1, C-3 – C-4, C-6, C-7, C-12
protection, C-1, C-2, C-3 – C-4, C-6, C-7, C-8
reconnaissance and security, C-13 – C-14
reconnaissance platoon, 1-4, 1-9, C-13 – C-14, 6-55 – 6-56
reports, C-2, C-10
toxic industrial material (TIM), C-14
unmasking, C-9 – C-10

O

observation and fields of fire, cover, obstacles, key terrain, and avenues of approach (OCOKA), 2-15, 3-10, B-9
obstacles, 3-16, 3-19, 3-32, 3-33, 3-38, 3-42, 3-44, 3-48, 3-50, 3-51, 3-53, 5-25
offensive operations, 1-25 – 1-26, 5-9 – 5-14, 6-10, 6-57, 8-9
operational environment, 1-20 – 1-32, 3-6 – 3-7, D-16, D-25
orders 2-5, 2-10 – 2-12, 2-35
FRAGO, A-8 – A-9
OPORD, 2-22 – 2-23, 2-35, A-1 – A-7, B-10 – B-13
WARNO, A-9 – A-11
outposting, 4-37 – 4-38

P

passage of lines, 5-40 – 5-45
PROPHET, 3-29, 5-32, 6-52 – 6-54

R

readiness condition (REDCON), 5-35
recce troop, 1-2, 3-1, 3-6, 3-23, 3-36, 4-36, 4-38
organization structure and personnel responsibilities, 1-5 – 1-9, 1-15 – 1-19
reconnaissance, 1-1, 7-24 – 7-31
and security, 3-16. *See also nuclear, biological, and chemical (NBC).*
and surveillance (R&S), 3-13 – 3-15, 4-22, 4-30, 4-36
aerial, 3-26 – 3-27
area, 1-4, 3-43 – 3-49
dismounted, 3-28
engagement criteria, 3-13
focus of, 3-1, 3-7, 3-11
fundamentals of, 3-2 – 3-6
handover, 3-21 – 3-26, 5-36
missions, 1-13
mounted, 3-28
multidimensional, 3-7, 7-25
planning, 3-11 – 3-14, A-11 – A-19
platoon, 1-7 – 1-8, 1-12
route, 3-49 – 3-54
sensor, 3-26
tempo, 3-11 – 3-12
zone, 1-4, 3-38 – 3-43, 4-12
rehearsals, 2-24 – 2-27, 4-8, 4-30, 5-32, 5-37
relief in place, 5-36 – 5-40
risk management, B-1 – B-6
rules of engagement (ROE), 3-11, 3-18, 3-46, D-22 – D-23
rules of interaction (ROI), D-24

S

security drill, 4-26 – 4-30
security operations, 1-28 – 1-29, 4-1 – 4-5, 4-31 – 4-32, 8-10, 8-13, 8-21
security missions, 1-4, 1-10, 1-13, 4-2
area security, 4-30 – 4-34
convoy security, 4-34 – 4-38
drill, 4-26 – 4-30
fundamentals, 4-3 – 4-5
high-value asset, 4-33
screen, 1-4, 4-10 – 4-30
situational awareness, 1-6, 1-11, 1-16, 1-30, 2-5, 2-7, 2-27, 4-4, 4-8, 4-10, 4-18, 4-30, 4-34, 5-1, 5-10, 5-15
situational understanding, 1-2, 1-31, 2-3, 2-5, 2-7, 3-5, 3-6, 3-20, 4-3
smaller-scale contingencies (SSC), 1-1, 1-3, 1-30 – 1-31, 3-8, 3-10, 3-50, 6-3, 6-7
stability operations, D-1 – D-9. *See also stability operations and support operations.*
arms control, D-7
combating terrorism, D-6 – D-7
diplomatic effort operations, D-4 – D-5
peace enforcement operations, D-4
peacekeeping operations, D-4
show of force, D-7
stability operations and support operations, D-1
compliance inspections, D-32 – D-33
environment, D-16
intelligence, D-17
media interviews, D-39 – D-40
minefield clearance, D-42 – D-43
presence operations, D-30 – D-32
reconnaissance troop employment, D-15
tempo, D-17
Stryker brigade combat team (SBCT), 1-2, 1-3, 1-4, 3-23 – 3-24, 4-16

support operations, D-9 – D-15. *See also stability operations and support operations.*
domestic support, D-10
foreign humanitarian assistance, D-11
relief operations, D-11
surveillance troop, 1-8 – 1-9, 7-22 – 7-23

T

tactical internet, 2-31 – 2-32
tactical movement, 1-29 – 1-30, 5-3. *See also tactical road march.*
tactical road march, 4-12, 5-4 – 5-9
target acquisition, 5-27, 5-32 – 5-33, 6-8 – 6-9
terrain, 3-3, 3-4, 3-6, 3-7, 3-10, 3-11, 3-13, 3-14, 3-18, 3-19, 3-27 – 3-30, 3-34, 3-36, 3-38, 3-39, 3-42 – 3-46, 3-48 – 3-51, 3-53, 5-2 – 5-5, 5-7, 5-9, 5-10, 5-17, 5-18, 5-20, 5-21, 5-23, 5-29, 5-33, 5-35, 5-38, 5-40, 5-42, 5-46 – 5-48
threat, 1-20, 1-25, 1-28, 3-8, 4-26
troop-leading procedures, 2-12 – 2-28, 3-11, 3-13, 3-14, 3-17, 3-39, 3-44, 3-45, 3-51, A-1

U

unmanned aerial vehicle, (UAV), 1-4, 1-9, 3-2, 3-4, 3-14, 3-17, 3-18, 3-22 – 3-24, 3-27, 3-29, 3-40, 3-42, 3-45, 3-46, 3-48, 3-51, 3-53, 4-9, 5-32
platoon, 6-45 – 6-48
urban operations, 3-7
infrastructure, 3-9, 7-10
patrolling, 7-25 – 7-29
physical environment, 7-6 – 7-10
society, 3-8, 7-10
terrain, 3-10, 7-5
threat, 3-8, 7-10 – 7-11

W

wide area network, 2-31

FM 3-20.971
2 DECEMBER 2002

By order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0307302

DISTRIBUTION:

Active Army, Army National Guard, and US Army Reserve: To be distributed in accordance with the initial distribution number 115890, requirements for FM 3-20.971.

PIN: 080695-000